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TABLE OF CONTENTS

PAGE

Introduction 1

CHAPTER

I.—Basic (Primary and Middle) Education 6
II.—Pre-Primary Education 14
III.—High School Education 18
IV.—University Education 26
V.—Technical, Commercial and Art Education 34
VI.—Adult Education 46
VII.—The Training of Teachers 57
VIII.—The Health of the School Child 63
IX.—The Education of the Handicapped 74
X.—Recreative and Social Activities 81
XI.—Employment Bureaux 86
XII.—Administration 88
Conclusion 93
Notes by Members 96
Appendix 104
Index 114

[The figures and estimates contained in this report refer, unless otherwise stated, to British India only.]

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INTRODUCTION

1. The White Paper containing proposals for the post-war expansion of the British system of Education, which was laid before Parliament not long ago, begins with these words:—

> "Upon the education of the people of this country the fate of this country depends."

If the people of Great Britain, which even before the war was spending from public funds the equivalent of Rs. 33-2-0 per head of the population on education, need such an admonition it would appear to be even more necessary in relation to India, where the comparable expenditure in 1938-39 was Rs. 0-8-9 per head.

In the expectation that sooner or later a serious attempt would have to be made to tackle the problem of providing India with a system of education approximating to those available in other countries, the Central Advisory Board of Education have devoted their attention in recent years to surveying the main fields of educational activity with a view to ascertaining what would be the minimum provision required. Since their reconstitution in 1935 they have set up Committees to study and report upon the following, among other, subjects:—

1. Basic Education (2 reports).
2. Adult Education.
3. The Physical Welfare of School-Children.
4. School Buildings.
5. Social Service.
6. The Recruitment, Training and Conditions of Service of Teachers in Primary, Middle and High Schools.
7. The Recruitment of Education Officers.
8. Technical (including Commercial and Art) Education.

At their last two meetings they have reviewed the recommendations of these Committees with special reference to post-war needs and to the possibility of post-war developments, and they are satisfied that, subject to such modifications as will be indicated in this report, they provide the foundations upon which an efficient system of public instruction, suited to the needs and circumstances of this country, can effectively be erected. The expenditure involved is admittedly heavy but the experience of war suggests that when a paramount necessity can be established, the money required to meet it can and will be found. It is for India to decide whether the time has arrived when a national system of education is a paramount necessity.

Since the primary object of this report is to place a practicable plan of post-war development before the Reconstruction Committee of the Viceroy's Executive Council, which will hardly have the time or the desire to concern itself with matters of educational method or technique, only such reference will be made to the contents of these reports as may be necessary to elucidate the general principles upon which the Board's present recommendations are based. For the sake, however, of those who will not be satisfied merely to inspect the general plan of the proposed structure but will also want to know in detail how it might be built and equipped throughout, it has been decided to reprint in a slightly abridged form the reports of the Committees referred to above. All that need be said here, therefore, is that while the Board have aimed at a standard comparable with those already attained in Great Britain and other Western countries before the war, they have been careful not to adopt western ideas or to copy western methods without being fully satisfied that they are those best suited to India. They also realise that conditions in different parts of India vary greatly and that consequently their aim should be to indicate the main lines which development should follow rather than to prescribe any uniform or detailed plan. It will be for the responsible educational authorities to devise for themselves within the general lines laid down the type of education most appropriate to their particular areas, and with this object in view, to give the fullest encouragement to every form of potentially useful experiment. While the aim throughout has been to devise a system which is essentially Indian, the Board at the same time believe that there are certain fundamental principles which must determine the training of the future citizen, wherever in the world he or she may happen to dwell, and they cannot conceive that any form of social or political community will ever prosper unless the importance of fostering in the rising generation such attributes as physical fitness, intelligence and integrity of character receives the fullest recognition. In particular they are anxious not to expose themselves to the criticism that they have ignored the moral or spiritual side of education; they wish to state with all the emphasis in their power that at all stages of education the training of the intellect and the training of character must proceed side by side.

2. The Board anticipate that many aspects of the scheme set out in the following pages will excite public criticism. This they will certainly welcome, if its aim is constructive and it is with no desire to forestall it that they express the opinion that it will probably crystallise into one of two forms, either that the scheme costs too much or that it takes too long. In both cases it should be pointed out that the determining factor is the teacher, and particular attention is consequently invited to the standards adopted by the Board for the recruitment and training of teachers on the one hand and for their remuneration on the other. If the teachers of different grades are to be paid the salaries which the Board regard as the minimum likely to attract men and women of the right type and with adequate qualifications, the total cost of a national system cannot be materially reduced. On the other hand, if entrants to the profession are to possess the minimum qualifications and undergo the minimum training which the Board regard as essential, the additional recruits will only be forthcoming as new schools and colleges are brought into existence, since the present system is entirely incapable of supplying the number required. Progress cannot outstrip the supply of teachers, and the assumption in this report that about 35 per cent. of the output of the new High Schools will be attracted into the teaching profession may well turn out to be over-optimistic. The Board, therefore, see no prospect of shortening the period without lowering teaching standards, which they would most strongly deprecate or conscripting teachers, which they would only contemplate as a last resort.

3. It may also be advisable to clear the ground for an impartial consideration of the proposals in this report by attempting to anticipate other possible misconceptions. The first is that greater liberality on the part of Governments rather than any radical change in the method of approach is all that is needed. It is certainly not the Board's desire either to exaggerate existing defects or to overlook what has been achieved in the face of grave difficulties at certain times and places but in their considered opinion it is inconceivable that within a reasonable period a really national system could be developed or evolved from what now exists or by the methods hitherto followed. Apart from the extremely slow progress which had been made before the war, the present system does not provide the foundations on which an effective structure could be erected; in fact much of the present rambling edifice will have to be scrapped in order that something better may be substituted. A second possible misconception is that some half-way house of a less expensive type can be found between what now is and what this report advocates. The answer to this is that the minimum provision which could be accepted as constituting a national system postulates that all children must receive enough education to prepare them to earn a living as well as to fulfil themselves as individuals and discharge their duties as citizens. It also requires that those with the requisite capacity should be further trained to fill positions of responsibility in all walks of life. It has been suggested by some of those who shrink from the financial implications of going the whole way, that education might be limited to all the children in some places or some of the children everywhere or some of the children in

some places only. Even if such a differentiation could be regarded as compatible with the claims of social justice it is difficult to see how the selection involved could be fairly made. If there is to be anything like equality of opportunity, it is impossible to justify providing facilities for some of the nation's children and not for others. In the first place, therefore, a national system can hardly be other than universal. Secondly it must also be compulsory, if the grave wastage which exists today under a voluntary system is not to be perpetuated and even aggravated. And thirdly, if education is to be universal and compulsory, equity requires that it should be free and common sense demands that it should last long enough to secure its fundamental objective.

A word of warning based on experience elsewhere is necessary against any proposal on economic grounds to apply compulsion only up to the end of the Junior Basic (Primary) stage in the first instance and then to extend it gradually upwards as circumstances suggest or finances permit. It is true that this method has been followed in England and other countries but those who have had experience of it know how much inefficiency and waste it has entailed. It is significant that for this very reason Education Authorities in England are still wrestling over seventy years after the passing of the Education Act of 1870 with the task of reorganising the lower storeys of the educational structure. Furthermore, basic education from 6—14 is an organic whole and will lose much of its value, if not so treated; in any case an education, which lasts only five years and ends about the age of eleven, cannot be regarded as an adequate preparation either for life or livelihood. If, as would appear to be the case, a universal compulsory system of basic education can only be introduced by stages, the progression should clearly be from area to area and not from age to age.

4. Even though all the nation's children are brought to school, success will not be achieved unless the teaching is effective and efficient teachers will have to be properly paid. Attention is called to the fact that the recommendations as to teachers' salaries, which will be found set out in full in the appropriate chapters, were unanimously approved at a meeting at which every Provincial Government was represented. It should also be noted that they were fixed with reference to pre-war standards of living. Once teachers' salaries are settled, it is not difficult to fix a datum line of expenditure below which it can be shown that the requirements of a national system will never be satisfied. The object of this report is to fix that datum line, subject of course to the proviso that it will require modification in the light of the conditions obtaining in India in the years to come.

5. A reference may usefully be made here to the report on School Buildings, because very little will be found in this report about the vast programme of school construction which will be necessary, if a national system is to be brought into being within a period of 30 to 40 years. It is true that provision has been made in all the estimates of recurring expenditure for interests and sinking fund charges on the assumption that non-recurring expenditure on school buildings will as a rule be met out of loans in future. Without a proper loan system any large building programme becomes almost impracticable. It is also worth recalling that the minimum standards to be observed in respect of the provision of sites, buildings, equipment etc. for schools of all types have been prescribed in detail in the report referred to and that due regard has been had to the possibility of taking advantage of climatic conditions, cheap methods of construction and other factors which may aid in reducing the cost. In connection with the provision of equipment, special emphasis may be laid on the importance of adequate libraries and of making the fullest possible use of what are commonly described as mechanical aids to learning, *e.g.*, the cinema, the radio, the gramophone, the epidiascope, the magic lantern etc.

6. Some apology or explanation may be required for the absence of much specific reference in this report to the question of education for girls and women. This is certainly not due to any failure to recognise the magnitude

of this issue; in fact quite the opposite. The past tendency to treat girls' and women's education as a problem on its own—it still enjoys a chapter to itself in many Provincial education reports—has distracted attention from the fact that in any modern community it is even more important for the mothers to be educated than the fathers and that consequently all educational facilities *mutatis mutandis*—and the differences are by no means so fundamental as the old-fashioned imagine—should be equally available for both sexes. It is, therefore, assumed in the following pages that whatever is needed for boys and men, not less will be required for girls and women. This may even apply to Technical Education not many years hence.

7. For somewhat similar reasons little will be found here about those communal or caste divisions, which figure so prominently in the political and social life of India today. The extent to which they complicate and may continue to complicate even the solution of purely educational problems is fully realised but it is to be hoped that a national system of education, which deserves the name, will aim at satisfying impartially the needs of everybody. It is certainly intended that the educational provision contemplated in this report will cater equally for all, irrespective of the community or caste to which they may belong.

The question of religious education, however, falls into a different category. The importance which the Board attach at all stages of education to the training of character has already been stressed. There will probably be general agreement that religion in the widest sense should inspire all education and that a curriculum devoid of an ethical basis will prove barren in the end. The Board certainly envisage that private schools conducted by denominational and other bodies will have their appropriate place in a national system, provided that so far as secular instruction is concerned, they comply with the conditions and reach the standards prescribed in the case of State schools. It will be for the responsible authorities to consider the more difficult question of the facilities which could or should be provided for those children in State Schools whose parents desire them to receive dogmatic religious education. At the same time the Board feel that it may be useful to lay down certain general principles for guidance as to the best way in which the whole question of religious education should be approached and they have accordingly appointed a special Committee for this purpose.

8. There is another matter which bulks very large in the minds of many educationists but will be found to have received very little attention in this report. This is the subject of Examinations. There are two reasons for this omission. In the first place, the subject has been under consideration by a Committee of the Board, which has only just completed its investigation, and there has been no time for its recommendations to receive the attention they deserve from the authorities concerned. In the second place while a national system of education will no doubt still have to have examinations of some kind, it seems highly desirable to get the system started and then devise examinations to suit it. Otherwise the urge to draw up an examination syllabus first and fit the new system to it will be found irresistible by many.

9. The Board wish again to make it clear that their object in this report is to indicate in broad outline the minimum educational requirements of this country and to show how long it would take to satisfy them and roughly what it would cost. It is clearly beyond their power at this stage to prescribe the precise lines which future developments should follow, though they have endeavoured to lay down principles for general guidance. As has already been pointed out, it will be for the various authorities entrusted with the administration of education at its different stages to work out detailed schemes suited to the particular needs of the areas or institutions for which they are responsible.

The same caution must apply to the estimates of cost which will be found in the following pages. These are based partly on actual figures which the Board believe to be reliable and partly on certain assumptions which they regard as justifiable. They realise, however, that certain factors are likely to arise during the considerable period which is bound to elapse before the proposed scheme can be brought into full operation, which will necessarily affect, and may affect greatly, the calculations set out in this report. In the first place the estimates are based on pre-war standards. Any variations which may take place during the next generation in the general cost of living, and particularly in rates of remuneration or prices of materials, will necessarily have a corresponding effect on educational expenditure. Then again the present estimates are based on the latest available figures in regard to population. It is impossible to forecast at what rate the school population will increase in future. It is true that some-provision has been made to meet this, inasmuch as the existing educational expenditure has been left out of account in estimating the cost of the national system proposed and has been deliberately kept as a reserve towards meeting the cost of further expansion due to increase in population. It may well prove inadequate for this purpose. Furthermore, if during the next thirty or forty years standards of living generally improve to the extent hoped, public opinion may demand and the State's resources may justify the provision of educational facilities on a more liberal scale than that outlined here. Doubts have already been expressed as to whether the proposed teachers' salaries, which largely determine the total cost, will in fact be adequate to attract recruits of the calibre and in the quantities required. These and other factors will modify the present estimates and they are likely to modify them in an upward direction. The Board's object throughout has not been to plan an ideal system of public instruction but rather to lay down the very minimum necessary to place India on an approximate level with other civilised communities. Even so the financial implications are formidable and whatever variations possible economies in details and a more accurate working out of local programmes may involve, it is unlikely that the picture as a whole will be materially changed. The need for a drastic reconsideration of the present method of paying for education and for a redistribution of the burden between the Central and Provincial Governments will surely remain.

Although the Board recognise that it may be outside their province to explore the financial issues they have raised and that in any case the claims of education cannot be considered independently of those of other essential social services which are beyond their purview, they have not been able to avoid giving some consideration to the question of ways and means. They feel, however, that it would be well to defer any discussion of this issue until the concluding chapter of this report, by which time the nature of and the reasons for the developments they are advocating will, it is hoped, be more fully appreciated.

10. Unless they have signally failed to diagnose India's educational needs, the Board feel that given the will and the money, the stage is now set for a start to be made and no one need complain that he is held up by uncertainty as to what should be done or how it should be done. They recognise that much devoted service has been rendered to the cause of education both by bodies and by individuals, but in a country where apathy and inertia have reigned so long in the educational domain and where poverty has been the accepted excuse for leaving undone what ought to be done, a prodigious effort will be needed on the part of those responsible, both to set things going and to face the financial implications which such action will involve. Other countries, however, are already on the march towards the goal of social security and if India continues to evade her responsibilities in this respect, she must be content to relegate herself to a position of permanent inferiority in the society of civilised nations.

CHAPTER I.—BASIC (PRIMARY AND MIDDLE) EDUCATION

1. In every country in the world, whether occidental or oriental, which aspires to be regarded as civilised, with the exception of India, the need for a national system of education for both boys and girls which will provide the minimum preparation for citizenship has now been accepted.

In India the need for similar provision has been under discussion for many years, but that no substantial progress has yet been made is obvious from the fact that over 85 per cent. of her population is still illiterate. Any country so situated is a potential source of danger under modern conditions and when the country in question is or aspires to be a democracy, the position becomes worse than dangerous. The primary requisite of any system of public education for a democracy is that it should provide for all its members, and not for a few only, at least such training as may be necessary to make them reasonably good citizens.

It cannot be said that world opinion has yet reached or is even approaching a final conclusion, as to what the length and content of this minimum training should be. Before the war in the U.S.A., and in most European countries the period for compulsory education extended from the age of five or six to fourteen or fifteen. The plans for post-war educational development which have been published foreshadow some lengthening of this period.

The two Committees on Basic Education, set up by the Central Advisory Board of Education in 1938-39, on whose reports the proposals contained in this chapter are very largely based, have prescribed that the age-range for compulsory school attendance in India should be from six to fourteen. While for reasons given in the next chapter a somewhat lower age than six for starting school might be educationally desirable, a compulsory school life of eight years may be taken as the basis upon which plans for immediate post-war development should be made. The Inter-University Board have suggested an eight-year compulsory school life beginning at age five but the Board regard thirteen as too early an age for 80 per cent. of the future citizens to finish their full time education, while to increase the compulsory period by one year would add approximately Rs. 20 crores to the ultimate cost. While adhering to six as the minimum age for compulsion they agree that children should be encouraged to attend school at five or even earlier. In conformity with worldwide opinion the Committees mentioned above recommended and the Central Advisory Board agreed that any system of universal compulsory instruction must also be free.

2. Although the scope of the provision outlined above may not appear very generous in comparison with what is contemplated elsewhere, a very brief survey of the present position in India will show clearly what an enormous advance it will mean as well as the magnitude of the problems which will have to be solved before it can be brought into full operation. In 1940-41 compulsion was in force in 194 urban areas and 3,297 rural areas (comprising 14,501 villages) in British India. Of these 66 urban and 2,908 rural areas were in the Punjab. It extended in no case beyond the end of the primary stage, *i.e.*, class IV or V and except in 23 areas, applied to boys only. Moreover, it cannot be said that in any of these areas, even in the Punjab, compulsion is really effective. It can hardly be so where there is no organised system of trained Attendance Officers to see that children attend school and the courts are disinclined to enforce the law.

Apart from the comparatively few compulsory areas, attendance at school has been and still is on a voluntary basis. In 1936-37* there were 1,19,85,986 pupils on the registers of some school or other as compared with approximately 6,00,00,000 children in the 5—14 age-group. Of these children 51,88,601 were in class I, 23, 55, 418 in class II, 17,22,292 in class III, 12,14, 504 in class IV and only 7,03,628 in class V. The balance were in Middle Schools, including the middle sections of High Schools. Figures for previous years record a similar falling off. Attendance is of course better in some areas than in others but in regard to British India as a whole these figures mean that less than one out of every four children stayed long enough at school to reach the earliest stage *viz.*, class IV, at which permanent literacy is likely to be attained. The result is that money spent on the others (nearly 80 per cent.) may be regarded as largely wasted.

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* Eleventh Quinquennial Review of the Progress of Education in India.

There is only one way to stop this wastage and that is to make education compulsory. In addition to Attendance Officers who know their duty and courts which are ready to do theirs, educational propaganda on an intensive scale will have to be carried out, if parents are to be made to realise that education extending through childhood to the early years of adolescence is a paramount necessity in the interest of their children. In almost every country, compulsion when first introduced has been met by opposition, mostly from the very quarters which it was especially designed to benefit. It is hardly surprising that poor peasants and labourers should be reluctant to sacrifice any contribution which can be expected from their chillren towords the livelihood of the family, but at the same time there must be something seriously wrong with economic conditions, if the budget of even the poorest family is dependent on the earnings of the little children. It is encouraging to note from experience in other parts of the world that no nation which has once been given a public system of education, however imperfect it may be and whatever the opposition to it in the beginning, would now submit to be deprived of it.

3. It is unnecessary to repeat here in detail the proposals made by the Committees of the Central Advisory Board for the organisation of a national system of compulsory education on basic lines for all boys and girls between the ages of six and fourteen. Their reports have already been made public, but for convenience a summary of their main conclusions and recommendations has been included at the end of this chapter.

Basic (Primary and Middle) education, as envisaged by the Central Advisory Board, embodies many of the educational ideas contained in the original Wardha scheme, though it differs from it in certain important particulars. The main principle of "learning through activity" has been endorsed by educationists all over the world. At the lower stages the activity will take many forms, leading gradually up to a basic craft or crafts suited to local conditions. So far as possible the whole of the curriculum will be harmonised with this general conception. The three R's by themselves can no longer be regarded as an adequate equipment for efficient citizenship. The Board, however, are unable to endorse the view that education at any stage and particularly in the lowest stages can or should be expected to pay for itself through the sale of articles produced by the pupils. The most which can be expected in this respect is that sales should cover the cost of the additional materials and equipment required for practical work.

"Basic" education, while preserving its essential unity, will consist of two stages the junior (or Primary) stage, covering a period of five years and the senior (or Middle) stage, covering three years. Those who find the term "Basic" unattractive and prefer the existing nomenclature of "Primary" and "Middle" for these two stages are of course at liberty to retain these, provided they accept the essential unity of the two stages and the necessity of so planning the Primary course that it leads up naturally to the Middle. The main reason for this division is that at about the age of eleven or twelve, with the onset of adolescence, certain mental and physical changes occur in boys and girls which necessitate a corresponding adjustment both in the content of the curriculum and in the methods of instruction. "Hence", as the second Basic Committee say, "arises the need for treating the instruction given before and after this psychological break as forming two well defined stages, each with its own scope, aim and technique though inspired by the same fundamental aim."

It has also been recommended that the transfer of children from the "basic" school to other forms of post-primary education should be provided for after the 5th class, *i.e.*, at the conclusion of the Junior Basic (Primary) stage or about the age of eleven *plus* in order that children with special abilities and aptitudes may embark on a more prolonged course of further education than can be provided in the Senior Basic (Middle) Schools, where the great majority will finish their full-time schooling. Reference will be found in the chapter on High Schools to the question of how to select such children and to the assistance which will be necessary to enable poor children of ability to enjoy the benefits of higher education. As the Committee say:—

"The various types of post-primary schools (other than the 'Senior Basic' school) to which suitable children may be transferred at the end of the Junior Basic Stage should provide a variety of courses extending over a period of at least five years after the age of eleven. These courses while preserving an essentially cultural character should be designed to prepare pupils for entry to industrial and commercial (and one may add agricultural) occupations as well as to Universities".

With regard to the Senior Basic (Middle) School, its main objective has already been defined. On leaving it the pupil should be prepared to take his place in the community as a worker and as a future citizen. He should also be inspired with the desire to continue his education through such means as a national system of education may place at his disposal. With this end in view the Senior Basic School should afford the widest possible opportunities for those corporate activities, including physical training and organised games, which are essential to supplement the instruction given in the class-room.

Careful consideration has been given to the question whether English should be introduced as a subject in the Basic School. The Board are of opinion that under no circumstances should it find a place in the curriculum of the Junior Basic (Primary) School. Nor are they satisfied as to the desirability of introducing it at the Senior Basic (Middle) stage but they recognise that there may be a strong public demand for it in certain areas and they feel that the final decision in this case must be left in the hands of the Provincial Education Department. This modifies conclusion No. 13 of the First Committee (*cf.* page 11).

It is important that a Senior Basic (Middle) School should contain enough children to make proper grading possible and to enable adequate facilities for practical instruction to be provided on an economic basis. For this reason in rural areas with a scattered population, hostels will have to be attached to Senior Basic (Middle) Schools.

Experiments in Basic education have already been carried out in five Provinces and these should provide in due course valuable data for future developments.

4. Some indication has been given above of the kind of education which a national system should provide for the great bulk of the country's children; those desiring further information should consult the two Reports already mentioned. Attention must now be turned to what is in fact the predominant factor in the success of all education, *viz.* the quality of the teacher. It is a notorious fact that the teaching profession in this country is miserable paid—the average pay of primary teachers in Government schools is Rs. 27 p.m. and in private schools it is generally lower; in one large Province the average is less than Rs. 10 p.m. It is clear that both the pay and the status of the teacher will have to be very considerably improved if the profession is to attract the right type of recruit. The present position is explicable only on the assumption that the authorities responsible do not regard education as a service of any real public importance. An all-round improvement in the standard of teaching is all the more necessary because Basic Education in view of its emphasis on craft work and the correlation of other subject therewith demands a high level of teaching skill, if it is to be really successful.

A particularly urgent need is that for a vast increase in the number of trained women teachers. Apart from the Pre-Primary Schools, where all the teachers must be women, at least three-fifths of the teachers in Junior Basic Schools and one-half of those in Senior Basic Schools ought to be women. It has been assumed that the former will generally be mixed but that separate schools for boys and girls will be the rule in the latter. In 1942 the Central Advisory Board of Education appointed a Committee to consider the whole question of the recruitment, training and conditions of service of teachers and the recommendation contained in their report were adopted unanimously by the Board at their meeting held in January 1943. Detailed reference is invited to this important report, as its findings will be found to determine to a very large extent both the efficiency and the cost of the national system now under consideration. Briefly, the Committee prescribed as the minimum qualifications for a teacher in a Basic (Primary or Middle) School a matriculation certificate or its equivalent followed by a two or three years' course of professional training. In regard to salaries their essential recommendations are set out below:—

The minimum national scale for teachers in Junior Basic (Primary) Schools (including Infants and Nursery Schools) should be Rs. 30—1—35—3 (biennially)—50 p.m.; the same scale is recommended both for men and women. The Committee regard it as essential that teachers of village schools should have free houses: where this is not possible, 10 per cent. should be added to their salaries. This scale, which has been framed for what may be described as normal rural areas, may be increased up to 50 per cent. to meet the needs of areas where the cost of living or other factors necessitate a more generous scale, *e.g.*, in Delhi or one of the provincial capitals the initial salary for primary teachers may be raised to Rs. 45 and the maximum to Rs. 75.

For teachers in Senior Basic (Middle) schools the minimum scale recommended is Rs. 40—2—80 p.m., with the same provision as in the case of primary teachers for increasing it to meet the needs of more expensive areas. Here also the Committee see no reason for differentiating between men and women.

The scales prescribed above are for ordinary assistant teachers in the different types of school. The Committee are aware that by themselves they will hardly achieve the object of making the teaching service attractive to really good people or placing it on a level of comparative equality with other professions. But the Committee believe that the inducements to the keen and ambitious to take up teaching can be increased if a reasonable number of posts are available which carry salaries above the ordinary scales. Outstanding among these posts are those of Headmaster and Headmistress and much may be done to raise the status of teaching in the eyes of the public generally and of parents in particular by according special recognition to these posts. Apart, however, from what may be described as the propaganda aspect of this matter, the Committee are convinced that not only the administrative responsibilities of Heads in all but the smallest schools but what is much more important the influence which particularly in rural areas they should exercise on pupils, parents and the community at large must receive much greater recognition than they have received hitherto. The head of even the smallest school ought to be a person of consequence in the district and this should be reflected in his salary. The Committee accordingly recommend that Head Teachers in the different grades of schools should be remunerated as set out below:—

N.B.—As in the case of assistant teachers scales may be increased up to 50 per cent. in areas where the cost of living or other factors necessitate it.

I. Junior Basic (Primary Schools)

Grade	Size of school	Salary scale p. m.	Remarks
A.	1 or 2 class sections . .	Rs. 10 above scale for assistants	Same scale for men and women. Where no house is provided, 10 per cent, should be added to salary.
B.	3, 4 or 5 class section , .	Rs. 50—4—70	
C.	5 or 6 to 8 or 10 class sections	Rs. 60—4—80	
D.	Above 8 or 10 class sections .	Rs. 80—4—100	

2. Senior Basic (Middle) Schools—(Vernacular and Anglo-Vernacular)

Grade	Size of school	Salary scale p. m.	Remarks
A.	3 or 4 class sections	Rs. 80—4—100	Same scale for men and women. Where no house is provided, 10 per cent. should be added to salary.
B.	4 or 5 to 6 or 8 class section.	Rs. 90—4—110	
C.	Over 6 or 8 class section	Rs. 110—4—130	

The Committee were further of opinion that all recognised teaching service should ultimately become pensionable and that where no pension funds exist or can be expected to exist in the near future contributory provident funds should be at once established on the basis of 50 per cent. contribution from the teacher and 50 per cent. from the employer. Although, as will be seen, these scales represent a very substantial improvement on the existing position, it is still open to doubt whether in view of the better educational background now demanded they will succeed in attracting an adequate supply of teachers of the right type.

5. On the basis of 1 teacher to every 30 pupils in the Junior Basic (Primary) Schools and 1 teacher to every 25 pupils in the Senior Basic (Middle) Schools, 18,21,760 teachers will be needed to cope with a total school population of 5,15,25,000 between the ages of six and fourteen, excluding the 20 per cent. of children between eleven and fourteen who may be expected to proceed to High Schools.

A word of explanation may be necessary regarding the pupil-teacher ratio taken above. In the case of Great Britain, where even today a class in a Primary School may have 40 or more pupils on the register, it will be discovered on scrutiny that if the total number of children is divided by the total number of teachers employed, the average actually works out at less than 30 children per teacher. It is not practicable to organise schools, especially in the rural areas, into convenient units of say 40. If 40 were fixed as the maximum number of pupils per teacher, a school of 45 will need two, and one of 85, three teachers and so on. Then, too, classes have to be subdivided for craft subjects and Heads relieved of regular teaching duties, which necessitates extra teachers. It will also be remembered that at the Senior Basic (Middle) stage, classes will tend to be smaller and more subdivision will be necessary. A greater number of specialist teachers will also be needed. It will thus be seen that 1 teacher to every 30 children in Junior Basic (Primary) and 1 to every 25 in the Senior Basic (Middle) Schools is not an over-generous standard to take in regard to staffing.

6. with the data now available it is possible to make a rough and ready calculation of the approximate cost of establishing a national system of Basic (Primary and Middle) Schools. Teachers' salaries in Basic and most other types of school will account for roughly 70 per cent. of the total expenditure, the balance being distributed as shown in the table below:

Estimated Cost of a system of universal Basic (Primary and Middle) Education for British India when in full operation

Schoo's	Age Range	*Estimated No. of pupils (Lakhs)	†No. of teachers required	‡Average salary per teacher p. m	§Total salary bill per annum (Lakhs)	‖Other Expenditure (Lakhs)	Total gross cost per annum (Lakhs)	Cost per pupil per annum
1	2	3	4	5	6	7	8	9
				Rs.	Rs.	Rs.	Rs.	Rs.
Junior Basic (Primary) .	6—11	360	12,00,000	42·5	80,00	34,29	114,29	31·84
Senior Basic (Middle) .	11—14	156	6,00,000	61·5	60,55	25,95	86,50	55·31

* The estimate is based on Public Health Commissioner's Report, 1940. Of the 11—14 age-group four-fifths are shown in Senior Basic (Middle) Schools.

† One teacher to 30 pupils in Junior Basic (Primary) Schools, one to 25 in Senior Basic (Middle) Schools.

‡ Average salary on the basic scales in accordance with Government's actuarial calculation.

§ Additions have been made for Head Teachers, higher scales in urban areas, house allowances, Government contribution to pension or provident funds etc. Teacher's salaries are taken as accounting for 70 per cent. of the total gross cost.

‖ This includes (a) loan charges, 5 per cent. of total cost, (b) special services, including school medical service, special schools etc., 10 per cent., (c) administration, 5 per cent., (d) books, stationery, apparatos and equipment, maintenance and repair of buildings and furniture and miscellaneous charges, 10 per cent. Other expenditure is taken as accounting for 30 per cent., of the total gross cost.

A more detailed statement showing the estimated cost of establishing Junior and Senior Basic Schools in Provinces and Local Administrations will be found at Appendix—Tables A and B.

It will be seen from the above table that the total cost of establishing a national system of Basic (Primary and Middle) Schools will be just over Rs. 200 crores. From this total the amount now spent on Primary and Middle Schools (except perhaps the Middle sections of High Schools) should be deducted in theory to give the additional cost that will be involved by the establishment of a universal compulsory and free system of Basic Education for boys and girls between six and fourteen. Such a deduction would, however, only be justified in fact, if it were feasible to establish such a system in the very near future; but for a compelling reason, which is explained in the chapter on the Training of Teachers, it will take under the most favourable auspices 30 to 40 years before it can be brought into full operation. It has, therefore, been thought prudent to treat the money now spent on educating children in Primary and Middle Schools as a reserve to meet in part, at any rate the probable increase of population during the period of expansion.

7. The conclusions contained in the reports of the Board's two Committees on Basic Education which examined the Wardha Scheme are set out below :

(a) First Committee:

(1) The scheme of 'basic' education should first be introduced in rural areas.

(2) The age range for compulsion should be six to fourteen years, but children can be admitted to the 'basic' school at the age of five.

(3) Diversion of students from the 'basic' school to other kinds of schools should be allowed after the 5th class or about the age of eleven *plus*.

(4) The medium of instruction should be the mother tongue of the pupils.

(5) A common language for India is desirable. This should be Hindustani with both the Urdu and Hindi scripts. Option should be given to children to choose the script and provision should be made for teaching them in that script. Every teacher should know both scripts, *viz.*, Urdu and Hindi. Some members of the Committee suggest that the adoption of Roman script might prove a solution to the language difficulty and greatly minimise the work of both scholar and teacher.

(6) The Wardha Scheme of basic education is in full agreement with the recommendations made in the Wood—Abbott Report so far as the principle of learning by doing is concerned. This activity should be of many kinds in the lower classes and later should lead to a ~~basic craft~~, the produce from which should be saleable and the proceeds applied to the upkeep of the school.

(7) Certain elements of cultural subjects, which cannot be correlated with the basic craft, must be taught independently.

(8) The training of teachers should be reorganized and their status raised.

*(9) No teacher should receive less than Rs. 20 per mensem.

(10) Efforts should be made to recruit more women teachers and to persuade girls of good education to take up teaching.

(11) Basic schools should be started only when suitable trained teachers are available.

(12) The curriculum will need revision in the light of experience.

†(13) English should not be introduced as an optional subject in basic schools.

(14) The State should provide facilities as at present for every community to give religious teaching, when so desired but not at the cost of the State.

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* (The minimum now prescribed is Rs. 30 p.m.).

† (Since modified—*cf* page 8).

(15) No external examinations need be held. At the end of the basic school course a leaving certificate based on an internal examination should be given.

(16) Pupils wishing to join other schools at the end of the 5th class (age eleven *plus*) should also be granted a leaving certificate.

(17) Promotion from class to class will be determined by the school, though the results of the internal examinations should be subject to the supervisor's inspection.

(b) Second Committee:

(1) While the provision of 'pre-basic' education in Nursery and Infants Schools and classes is highly desirable, it is not practicable at this stage, in view of the lack both of money and of trained women teachers, to advocate its introduction on a compulsory basis. Provincial Governments should aim in the first place (*a*) at providing model Infants and Nursery Schools in suitable centres, (*b*) at increasing the supply of properly trained infants teachers, who should be women, (*c*) at encouraging the enrolment in 'basic' schools of children below the minimum age for compulsory attendance and (*d*) at stimulating the provision by voluntary agencies of efficient 'pre-basic schools.

(2) 'Basic' education should comprise a course of eight years from the age of six to fourteen years and that this course while preserving its essential unity should consist of two stages—the first stage, the 'junior,' stage, covering a period of five years and the second stage, the 'senior', three years.

(3) The transfer of children from the 'basic' school to other forms of post-primary education should be allowed after the 5th grade, *i.e.*, at the conclusion of the 'junior basic' stage.

(4) The various types of post-primary school (other than the 'senior basic' school) to which suitable children may be transferred at the end of the 'junior basic' stage should provide a variety of courses extending over a period of at least five years after the age of eleven. These courses, while preserving an essentially cultural charater, should be designed to prepare pupils for entry to industrial and commercial occupations as well as to Universities.

(5) Special arrangements should be made in these schools for assimilating pupils who decide to continue their education after completing the full course in the 'basic' school *i.e.*, after reaching the 8th class.

(6) Suitable courses should be framed for girls attending 'senior basic' schools which should include such subjects as cookery, laundry work, needle work, homecrafts, the care of children and first aid, the remainder of the instruction to be correlated with this course of domestic science in accordance with the general principles of the 'basic education' scheme.

(7) A standing committee of the Central Advisory Board of Education should be appointed to watch new educational experiments carried on in the provinces as well as the progress of educational developments generally, with special reference to 'basic' education, and to make recommendations to the Board for necessary action. There should be a representative of the Hindustani Talimi Sangh on this Committee.

(8) Subject to such conditions as are set out in the report the Central Government should contribute not less than half the amount of the approved net recurring expenditure on 'basic' education in each province, the balance to be found by the Provincial Government and the local bodies entrusted by it with the administration of compulsory education. For capital expenditure on buildings, equipment etc., a loan system should be adopted.

(9) A central agency should be established in each province for the disposal of marketable articles produced in schools.

The Central Advisory Board of Education adopted most of the conclusions and recommendations of this Committee. With regard to conclusion No. 8 their decision was:

"While the majority of the members of the Board accepted the view of the Committee, the official members representing the Government of India expressed their inability to commit themselves in any way. The representative of the Legislative Assembly attending the meeting felt himself precluded under existing circumstances from supporting the Committee's recommendation. One or two members, while in favour of the principle that the Central Government should make some contribution, found themselves unable to go as far as the Committee desired".

8. Summary of the main conclusions in this chapter:—

(a) A system of universal, compulsory and free education for all boys and girls between the ages of six and fourteen should be introduced as speedily as possible though in view of the practical difficulty of recruiting the requisite supply of trained teachers it may not be possible to complete it in less than forty years.

(b) The character of the instruction to be provided should follow the general lines laid down in the reports of the Central Advisory Board's two Committees on Basic Education.

(c) The Senior Basic (Middle) School, being the finishing school for the great majority of future citizens, is of fundamental importance and should be generously staffed and equipped.

(d) All education depends on the teacher. The present status and remuneration of teachers, and especially those in Primary Schools, are deplorable. The standards in regard to the training, recruitment and conditions of service of teachers prescribed in the report of the Committee approved by the Central Advisory Board in 1943 represent the minimum compatible with the success of a national system: these should be adopted and enforced everywhere.

(e) A vast increase in the number of trained women teachers will be required.

(f) The total estimated annual cost of the proposals contained in this chapter when in full operation is Rs. 200 crores approximately.

CHAPTER II.—PRE-PRIMARY EDUCATION

1. It is one of the many consequences of the general lack of educational planning in India that a very impressionable, plastic and educationally potent period of a child's life has received so little attention. In most countries in Europe and America it has now been clearly recognised that the nursery or infants school has an important part to play in every school system. Russia, where an extremely efficient system of kindergartens, créches and nurseries has been evolved, deserves special mention in this connection. Outside India the nursery school has come into its own and has taken a well-defined place in the fabric of public instruction, but the importance of looking after the physical and mental welfare of future citizens from their earliest years has still to be brought home to the responsible authorities in this country. Official neglect, however, is far from being the only obstacle; ignorance and indifference on the part of the people most closely concerned has also contributed to the present sorry state of affairs. Even if proper facilities were provided, it would be by no means an easy matter to persuade the Indian mother to subordinate her natural affections in the interest of a more healthy physical and mental environment for her children. A great deal of propaganda and training of public opinion will be necessary before a system of pre-primary education can be successfully introduced.

2. It is necessary first of all to define what is meant by pre-primary education as applied to India's needs. In Great Britain and other Western countries, where the age for compulsory attendance is five or even lower, it is usual to distinguish between Infants Schools or classes, which cater for children between the ages of five and seven or eight, and Nursery Schools, or classes, which are designed for those below the compulsory school age. Nursery and Infants classes, as distinct from Nursery and Infants Schools, mean special classes attached to schools for older children. In the Indian system, so long as the age for compulsion is fixed at six, there will hardly be room for the Infants Schools as understood in the West. All pre-primary instruction, therefore, whether provided in separate schools or in classes attached to Junior Basic (Primary) Schools, may conveniently be called 'Nursery' because this word clearly denotes the character of the environment and teaching that will be required.

3. Of the reasons for providing special educational facilities for chidren below a compulsory age of six, which many people regard as too late an age for the great majority of children to start their schooling, the most urgent concerns the physical aspect. It has been established that many defects, which ought to be remedied quickly, reveal themselves before this age and it is therefore necessary, especially in town or other areas where housing conditions are unsatisfactory, that primary education should be supplemented by a generous provision of Nursery Schools and classes for children below the minimum age for compulsory attendance.

The Central Advisory Board's second Committee on Basic Education recognised this necessity, though it is possible that they under-emphasised the State's responsibility in the matter. It may be doubted whether private enterprise can be relied upon to fill the gap.

Apart from consideration of the children's health the case of the working mother has to be borne in mind. It would be regrettable if women were hindered from taking their proper position in society and contributing their share to its economic and cultural progress on account of domestic liabilities, but it would be still more regrettable if they were able to do so only at the expense of their children. It is the duty of the State to come to the rescue, for the sake both of its future citizens and of those that bear them, by providing bright, well-equipped and well-staffed Nursery Schools, where the children can be properly looked after while their mothers are at work. Educationally the Nursery School aims at providing a carefully controlled environment which should cater in the healthiest and wisest manner possible for the mental, physical and social needs of the growing child. If it is conceded that any stage of development the influence of environment is of importance, then it stands to reasons that in the very early years of childhood the provision of a good environment is of paramount importance. Where the home cannot provide this, it is the business of the State to intervene.

4. The question then arises as to what areas would be most suitable for the establishment of Nursery Schools. In this connection it is necessary to take into consideration, besides the actual needs of a given area, its economic aspect and the problem of sufficient numbers. It has already been pointed out that due to congestion, bad housing and greater vulnerability to disease, children in town areas need most the facilities that a Nursery School can offer and there are usually enough of them in a given area to make such provision a practicable proposition. Village children also, whose mothers in many cases have to work in the fields and whose homes are often hardly worthy of the name, have a strong claim for similar amenities. But it is doubtful whether in a radius of about a mile and a half, the maximum distance which small children can be expected to travel, and especially in rural districts where there are hardly any means of conveyance, enough children can be mustered to form a reasonably economical school. For this reason, therefore, it is suggested that instead of attempting to establish full-fledged Nursery Schools in village areas, a Nursery class should be added to the ordinary Junior Basic (Primary) School. In fact it is desirable that the lowest class in all village Junior Basic (Primary) Schools should be known as the Nursery or Infants class and should be specially staffed and equipped for that purpose. It is hardly necessary to say that it should be in the charge of a woman teacher (or teachers) who have received the appropriate training. The regular Nursery School may then be confined for the present to towns. It may conveniently be housed on the same site as, or even form a department of, the Junior Basic (Primary) School, since that will enable older children to look after their younger brothers and sisters on the way to and from school.

5. The question of staff for Nursery Schools and classes is an all-important one. A very specialised kind of training is required for dealing intelligently with the very young. That teachers for infants should be women goes without saying: they alone possess the essential sympathy and knowledge of child nature. At the present time the supply of such teachers in India is negligible and one of the first tasks of any re-organisation will be to enlist the services of suitable women and to see that they are properly trained.

The Second (Wardha) Education Committee of the Central Advisory Board of Education, 1939, laid down as one of their main decisions:

"That . . . . the provision of 'pre-basic' education in Nursery and Infants Schools and Classes is highly desirable . . . . . Provincial Governments should aim in the first place (*a*) at providing model Infants and Nursery Schools in suitable centres, (*b*) at increasing the supply of properly trained infants teachers, who should be women, (*c*) at encouraging the enrolment in 'basic' schools of children below the minimum age for compulsory attendance and (*d*) at stimulating the provision by voluntary agencies of efficient 'pre-basic' schools."

As has been already pointed out, the words 'highly desirable' are an under-statement. The provision of an adequate number of Nursery Schools and classes is essential and although it may hardly be practicable, at any rate in the beginning, to make attendance compulsory, the schools should be free and no pains should be spared to make them as attractive as possible with the object of persuading parents to send their children voluntarily.

Apart from the provision made by the State there should always be scope in education for private enterprise. The fact that Government has hitherto done so little in this sphere makes the private ventures that have been launched all the more valuable and praiseworthy. Among the best known of these are the Jitendra Narayan Ray Infant and Nursery School for Indian Children in Bengal, the Rajghat School and Children's Hostel, Benares, and the Infant's Section of the Besant Theosophical School, Adyar, in which the Montessori system of education is followed.

6. A word about the methods of education in the Nursery School is perhaps necessary. A young child, as Abbott and Wood remark in their report, "needs experience more than instruction" and this is precisely what the Nursery School should aim at providing. They go on to say "that the education of the young children should provide . . . . . . for their physical care, for training them in good habits and for widening their experience through interesting activities . . . . We envisage such activities as the following: acting and singing, physical exercises, games and dancing, care of flowers and animals, drawing and making things. These activities minister to one or other of the characteristic needs of children and provide them with experience which gives them confidence in their growing powers . . . . The infant schools must be sensible, happy institutions which patently do something for the children which the home does not do but yet which the parents appreciate when it is done." There is hardly any room for any formal instruction in the 3 R's in the daily programme of a Nursery School. But through sensory-training, through the promotion of self-expression, through community living and companionship in an educationally controlled environment, the all round development—mental, social and physical—of the child is fostered. The foundations are laid which cover all these aspects of growth and development and the young child is then ready to absorb and assimilate that education for citizenship which a well-planned Basic School should impart.

7. The total number of children to be provided for on these lines can hardly be calculated accurately. This will depend entirely on the nature of the areas under question and on the success of "nursery" propaganda. Then too the age range cannot be rigidly fixed. The two and three years old should be as welcome in a pre-Primary School as the fours and fives. But the ages three to six may be taken as the normal range for the nursery school child and it would appear from the latest figures available (1940) for British India that there are 2,13,08,000 such children in the rural areas, and 31,00,000 in the towns. In England, about 1 child in 7 attends school voluntarily before the minimum compulsory age. If the same proportion were taken for this country the number between three and six would be 35,00,000. For the present, however, it may be sufficient to provide places for roughly a third of these in Nursery Schools and classes. On the same basis of calculation as for the Junior Basic Schools, *i.e.*, 30 children per teacher at an average salary of Rs. 42.5 p.m. the annual cost *per capita* comes to Rs. 31.84. In actual practice, this will probably work out somewhat higher, since the great majority of nursery children will be educated in town areas where the average salary of a teacher will have to be raised in order to meet the higher cost of living. Moreover, Nursery Schools require more space and more equipment. On the other hand relief may be given so far as staffing is concerned if older girls from High Schools and Senior Basic Schools are attached to Nursery Schools for definite periods for training in child welfare. For the reasons stated above both the figure of 10,00,000 and the estimated cost must be regarded at tentative.

8. Summary of the main concusions in this chapter:—

(a) An adequate provision of pre-primary instruction in the form of Nursery Schools or classes is an essential adjunct to any national system of education. The provision in this respect at present is negligible.

(b) In urban areas, where sufficient children are available within a reasonable radius, separate Nursery Schools or departments may be provided: elsewhere Nursery classes should be attached to Junior Basic (Primary) Schools.

(*c*) Nursery Schools and classes should invariably be staffed with women teachers who have received special training for this work.

(*d*) Pre-Primary education should in all cases be free. While it may not be feasible to make attendance compulsory, no efforts should be spared to persuade parents to send their children to school voluntarily, particularly in areas where housing conditions are unsatisfactory and/or mothers are accustomed to go out to work.

(*e*) The main object of education at this stage is to give young children social experience rather than formal instruction.

(*f*) On the basis of a normal age-range of three to six years provision has been made for 10,00,000 places in Nursery Schools and classes.

(*g*) The total estimated net cost of the proposals set out in this chapter when in full operation is Rs. 3,18,40,000.

CHAPTER III.—HIGH SCHOOL EDUCATION

1. It has been assumed that in a national scheme of education all children up to the age of fourteen will be required to undergo full-time instruction. The function of the High School is to cater for those children who are well above the average in ability. It has been well said that the chief purpose of higher education is to form an élite not for its own sake but for that of society. Character and intelligence, which are the essential attributes of any elite, are not confined to any particular class in the community; hence the selective principle by which children should be picked out for higher education on completion of the Junior Basic (Primary) stage is of the greatest importance. At present admission to High Schools is mainly determined by whether parents or guardians are in a position to pay the fees; little trouble is taken to ascertain whether those who seek admission are likely to derive full benefit from a High School education. Moreover, the High Schools tend to regard all Middle Schools as potential feeders and there is hardly any attempt to differentiate between the middle school education which is meant to be a complete stage in itself, and that which is designed to prepare pupils for High Schools. Any reorganisation of the High School system, therefore, should treat High Schools as distinct units differing in outlook and objective from the ordinary Senior Basic (Middle) Schools in which most children will complete their full-time education. The Board contemplate that in future the High School course will cover six years from about the age of eleven. It will therefore cover the Middle stages so far as those children are concerned who are selected for admission to High Schools. Primary departments, even if housed in the same premises as High Schools, should be regarded as entirely distinct units and organised accordingly. Here as at the lower stages there will be an appropriate place in the new system for private schools provided they satisfy the requirements prescribed in the case of the State schools.

2. The Second Wardha Committee of the Central Advisory Board of Education gave very careful consideration in 1939 to the relationship of High Schools to the Basic system of education, and recommended that pupils at about the age of eleven *plus* should on completion of the fifth class of the Junior Basic (Primary) Schools be diverted either to Senior Basic (Middle) or to High Schools, according to their abilities, aptitudes and general promise. For some time to come it may not be practicable to make high school education either free or compulsory but if pupils are to be admitted by selection only, those without the necessary financial resources will have to be provided with free places and in many cases with maintenance allowances or stipends as well. It is only by the assurance of adequate financial assistance in necessitous cases that the selective process for High Schools can be carried out fairly and effectively. It is relevant to point out that since in future the cost of high school education will be met largely out of public funds and only partially from fees, every high school pupil will be to some extent a scholarship-holder and it is in the public interest to ensure that the pupils admitted are those most likely to take the fullest advantage of the education provided and so prove a remunerative investment on the part of the community.

The Board realise, however, that there will be parents who will wish their children to receive a high school education even though they may fail to reach the standard normally required for admission. The Board would not object to places being provided for such children on the condition that these are in addition to those required for children selected on the ground of ability and that the parents concerned are required to pay the whole cost of the education provided. It would appear inequitable to spend public money on providing higher education for those who have not shown that they are likely to take full advantage of it.

The selection of pupils for higher education, therefore, assumes great importance and the methods to be employed should receive the most earnest consideration. Generally speaking they should aim at discovering promise rather than actual attainment and should be based on a careful scrutiny of the candidate's previous school record and of his or her performance at an examination designed and conducted by experts. The following selective process, which has proved successful elsewhere, may be worth trying in this country. Heads of Junior Basic (Primary) Schools should be asked in the first place to submit the names of those pupils in the appropriate age-group who in their opinion and on the strength of their school record would benefit by a high school education. The lists so submitted should be scrutinised by the Inspector or Inspectors of the area concerned with a view to seeing whether each school has recommended a reasonable number of candidates. Consultations should take place between Inspectors and Heads with the object of revising the lists where necessary. The candidates on the lists so revised should then undergo a common examination, which should not be too strenuous and should be designed to test intelligence and promise rather than actual attainment. This common examination should be controlled by a Board of Examiners specially constituted for the purpose. Parents whose children are not included in the original list of recommended candidates should have the right of requiring that their children should be tested at the common examination. This is only an outline of the kind of selective procedure which will be needed to obtain the right quality of pupils for the High Schools. It is fully realised that there are other methods and that in any case, modifications will be required to suit local conditions. Moreover, it is not intended that those who are not selected at the end of the Junior Basic (Primary) stage should be altogether debarred from admission to High Schools. Facilities will have to be provided for the transfer of suitable children from the Senior Basic (Middle) to the High Schools at some later stage, particularly where they show definite signs of late development.

3. Experience of such selective tests in other countries suggests that one child in every four or five of the 11-12 year age-group wll be found fit for higher education. There is no reason to anticipate any substantial variation from this proportion so far as India is concerned. It has been generally accepted that with the adoption of the three years' degree course in Universities and the disappearance of the Intermediate stage, the high school course will in future cover six years or the equivalent of classes VI-XI in most provinces. On the basis of one child in every five being found fit for higher education, it is estimated that out of the total number in the age-group 11-17, at least 72,50,000 pupils in British India, boys and girls, both from urban and rural areas, will require accommodation in High Schools. In 1940-41, the numbers in the IX, X, XI and XII classes of High schools in British India are only 4,54,140. To these must be added the pupils in classes VI to VIII which form part of High Schools; the number of these is not known but may be assumed to be not more than 5,00,000. Altogether, therefore, there are not more than about 10,00,000 pupils in all the existing High Schools, so that it will be necessary to provide accommodation for 62,50,000 pupils over and above the numbers for whom provision is now available. In order to avoid empty places and consequent waste of public money, steps should be taken to prevent high school pupils being withdrawn from school before completing the course except with the approval of the appropriate authorities. Employers and parents ought to be made fully aware of the importance of this and guarantees to this effect should be required from every parent and guardian before pupils are admitted to High Schools.

4. The distribution of High Schools between rural and urban areas is a question which needs careful considesation. The figures for 1940-41 shows that out of a total of 3,861 High Schools in British India, 2,310 are located in urban areas, by which is meant towns with a population of over 5,000 persons, although the total population of these areas only amounts to 1/10th of

the whole. The obvious inferences are that a larger proportion of the urban children are prepared to avail themselves of High School education or that those from the rural areas who seek a High School education are usually obliged to migrate to urban centres. The latter tendency is inevitable in this country with its scattered rural population and so long as the total number of schools is adequate, it may not be necessary or even desirable to redistribute High Schools strictly according to rural and urban population. Villages which are in proximity to urban centres will naturally take advantage of the schools in those centres. At the same time there is much to be said for increasing the number of rural High Schools and making such arrangements in regard to hostels and conveyance as will enable suitable pupils from the remoter areas to attend. The High School with an agricultural bias has indeed a most important part to play in the new system. It will not only contribute towards improvement in agriculture and rural uplift generally but it will also be the recruiting ground for the teachers whom the rural basic schools will require in such large numbers.

5. High School education should on no account be considered simply as a prelminary to University education, but as stage complete in itself. Since as the national system expands, entrants to High Schools will be increasingly drawn from Junior Basic (Primary) Schools, it is clearly necessary that the curriculum in the lower classes of High Schools should develop naturally from that of the Junior Basic (Primary) School. While it will remain a very important function of the High Schools to pass on their most able pupils to Universities or other institutions of equivalent standard, the large majority of high school leavers should receive an education that will fit them for direct entry into occupations and professions. At present, there is a tendency for the high school curriculum to be unduly dominated by the requirements of Universities. In a well-organised system of public education only about one in ten to fifteen of the high school leavers will go on to Universities. Consequently, the High Schools should attach the utmost importance to preparing the great bulk of their pupils, who will not proceed to Universities, for entry into useful and remunerative employment of all kinds immediately on leaving school. It is to be hoped that in the near future with the development of a higher standard of High School education, a school leaving certificate, supplemented where necessary by further training of a technical or commercial type, will come to be regarded as a more normal qualification than a university degree for entry to all but the highest grades both in government service and business life. A changed outlook of this kind will demand a thorough overhauling of the present organisation and curriculum of High Schools. Since it is now generally accepted that there is no special road leading to culture and that a boy or girl can become educated in the real sense as easily through the medium of a course in technology or applied science as through one in arts, the task of harmonising cultural and vocational education ceases to present serious difficulties. It is essential that some kind of occupational interest or bias should enter into the later stages of the high school course.. At present, almost all schools follow the beaten track as laid down by Universities and examining bodies and there is little variety in the scope and scheme of studies.

6. The reorganised High Schools should be of two main types—(1) the Academic High Schools and (2) the Technical High Schools. To adopt a broad but by no means rigid differentiation, the Academic High Schools will impart instruction in the arts and pure sciences while the Technical High Schools will provide training in the applied sciences and in industrial and commercial subjects. In both types the course in the junior departments covering the present Middle stage will be very much the same and there will be a common core of the 'humanities' throughout. Art and music should form an integral part of the curriculum in both and all girls should take a course in domestic science. The proportion of schools in the two types will be mainly determined by the character of the locality and the nature of the employment which it offers. Where the population in a particular area will

admit the existence of a number of High Schools, there ought to be a sufficiently large variety of schools to cater for the needs of the locality as well as for the aptitudes of the pupils. Transfer from one type to the other should be made as easy as possible at any rate up to the end of the junior course. In smaller centres, which can only be served economically by single High Schools, the individual schools should be required to offer as wide a choice of courses as possible. In rural areas for reasons already given where pupils are likely to take to agriculture on their own farms or elsewhere, an agricultural bias should be given to the curriculum. While the needs of the area will be the dominant factor in deciding what types of schools and what variety of courses should be provided, it should not be forgotten that many pupils will benefit most from a practical course, even though they may not be destined for an industrial or commercial career.

7. The medium of instruction in all High Schools should be the mother-tongue of the pupils; English should be a compulsory second language. All pupils should also acquire some knowledge of mathematics and elementary science. Physical Training should be obligatory. It may not, however, be desirable to draw any rigid distinction between what may be called compulsory and optional subjects. The range available should be as wide as circumstances permit and subject to the same proviso the individual pupil's course should be settled in the light of his own aptitudes and interests and of the requirements of his probable future occupation. The following list of suitable subjects is intended to be suggestive rather than comprehensive; it is certainly not suggested that all pupils should study all of them up to the school leaving certificate standard though some are obviously suitable only for the senior stage:—

Academic High Schools

1. The mother-tongue.
2. English.
3. Classical languages.
4. Modern languages.
5. History (Indian and World).
6. Geography (Indian and World).
7. Mathematics.
8. Science (Physics, Chemistry, Biology, Physiology and Hygiene).
9. Economics.
10. Agriculture.
11. Civics.
12. Art.
13. Music.
14. Physical Training.

Technical High Schools

1. The mother-tongue.
2. English.
3. Modern languages.
4. History (Indian and World).
5. Geography (Indian and World).
6. Mathematics.
7. Physics.
8. Chemistry.
9. Biology.
10. Economics.
11. Technological subjects (wood and metal work, elementary engineering, measured drawing etc.)
12. Commerce (book-keeping, shorthand, type-writing, acountancy, commercial practice etc.).
13. Agriculture.
14. Art (including designing for industrial and commercial purposes).
15. Music.
16. Physical Training.

Girls High Schools

A choice of the above subjects together with "Domestic Science" for all at the appropriate stage.

8. It has already been pointed out that the great majority of high school leavers will look forward to entering employment immediately they leave school, though a certain percentage of them may be expected to require further training for a period of one to three years, either full-time or part-time, in order to qualify themselves for posts that require specialised skill. The nature and scope of this further training and of the facilities which should be provided are discussed in the chapter on Technical Education. Reference should also be made to the chapter on Employment Bureaux in connection with the arrangements for placing high school leavers in suitable employment. Since it is reasonable to hope that the High Schools of the future will contain the cream of the rising generation, the importance of seeing that their output reaches the right market can hardly be over-emphasised.

A special reference should, however, be made here to a national need which the High Schools may be called upon to satisfy in the near future. To bring a whole nation under a compulsory system of education many thousands of teachers will be required, and since matriculation has been rightly prescribed as the minimum educational qualification for any intending teacher, the High Schools will have to satisfy this demand. In addition to the needs of the teaching profession, any comprehensive scheme for developing the social services will involve a vastly increased supply of doctors and nurses. In view of the present dearth of entrants the urgent need of supplying an adequate number of girls of the right type both for the teaching and medical professions will be one of the first problems which the Girls High Schools will have to tackle. Out of 4½ lakhs of pupils now in the upper sections of High Schools, only 40,000 are girls. Education for girls will have to make rapid strides, if a national system of education is to be established within a reasonable period.

9. An approximate estimate of the gross cost of a reorganised system of High Schools, as described in this chapter, is detailed in Appendix—Table C, first according to Provinces, then the total for British India, as well as a provisional total for Indian States. As in the earlier stages of education, the heaviest item of expenditure will be that on teachers' salaries, which will amount approximately to 70 per cent. of the total gross expenditure. The Board have adopted appropriate scales of pay and allowances for graduate and non-graduate teachers in High Schools, and also for Head-teachers, according to the size of schools. The Board specifically lay it down that the scales prescribed are the *minimum* national scales for teachers and that unless these scales are adopted, the teaching service will not attract men and women of the requisite ability. The minimum salaries and allowances approved by the Board are set out below:—

Non-graduate Trained Teachers in High Schools—

Rs. 40—2—80 p.m.+6¼ per cent. Contributory Provident Fund.

10 per cent. house allowance in normal rural areas; possible increase up to 50 per cent. to meet higher cost of living or other special circumstances.

Graduate Trained Teachers in High Schools—

Rs. 70—5—150 p.m.+6¼ per cent. Contributory Provident Fund.

10 per cent. house allowance in normal rural areas; possible increase up to 50 per cent. to meet higher cost of living or other special circumstances.

Headmasters and Headmistresses—

of schools up to 250 pupils on roll Rs. 175—10—255 p.m.

of schools up to 500 pupils on roll Rs. 250—10—350 p.m.

of schools of over 300 pupils on roll Rs. 350—15—500 p.m.

The Board also recommend that some special posts of responsibility should be created among the senior teachers in High Schools, which would carry

Rs. 20 p.m. in addition to the ordinary salary. Such teachers would be in charge of main groups of studies, *e.g.*, Languages, Science etc. or of libraries, games, hostels and other important features of school life.

The following calculations are based on the salaries set out above.

The total number of pupils to be provided for in all High Schools in the age-group 11-17 in British India will be 72,52,920 (these figures are based on the Public Health Commissioner's Report for 1940-41). Of these, 39,09,794 pupils will be in the junior or middle stage of the High School, and 33,43,126 will be in the senior stage. One teacher for 20 pupils may be taken as a suitable staffing formula. This includes head-teachers, who may be expected to do a certain amount of class teaching but in big schools will be mainly concerned with administration, as well as teachers holding posts of responsibility. On this basis, the number of teachers required for High Schools in British India will be 3,62,640. Each High School should be organised as a single unit with a six years course, though for administrative convenience, particularly if it is a large school, it may be divided into a junior and a senior department. It is not, however, contemplated that the graduate teachers on the staff should confine themselves to the senior department and non-graduates to the junior department. For this reason the number of graduate and non-graduate teachers in the two stages of the High School has not been taken strictly in accordance with the number of pupils in the two stages but at half and half of the total number required. It has been assumed that 50 per cent. of the schools will ultimately be located in rural areas, and the other 50 per cent. in urban areas and that the requisite number of teachers in rural areas will have to be provided with rent-free houses or 10 per cent. of their salary towards house rent, and those in urban area schools will have to be given on an average a special allowance of 33⅓ per cent. of their pay to enable them to meet the higher cost of living in towns. This urban area allowance may, of course, vary according to local conditions and may go up to 50 per cent. of the normal salary in big cities. It may also be extended to rural areas in certain circumstances. A standard rate of provident fund contribution at 6¼ per cent. of the salary has been applied uniformly to all scales of pay.

The actuarial average pay of the non-graduate teachers in the scale of Rs. 40—2—80 is Rs. 61.5 per mensem and of the graduate teachers in the scale of Rs. 70—5—150 is Rs. 118·7.

To the total of salaries and allowances, as worked out on the above basis, 10 per cent. has been added to cover the higher salaries of Head-teachers and teachers holding posts of responsibility. It is not possible to determine the exact number of Head-teachers that will be required, as schools will vary in sizes according to the variety of courses of studies provided and the number of pupils available in different localities.

The total bill for teachers' salaries may be taken to represent 70 per cent. of the gross total cost of High Schools. The other 30 per cent. will include loan charges on school buildings, special services, including medical inspection and treatment, books, apparatus, equipment and administration.

The details of cost of the maintenance of High Schools, estimated as above, work out as follows:—

	Rs.
Estimated total number of pupils in High Schools	72,52,920
Total number of pupils in junior departments	39,09,794
Total number of pupils in senior departments	33,43,126
Estimated total number of teachers in High Schools at the rate of 1 teacher to 20 pupils	3,62,640
Total number of non-graduate teachers	1,81,320
Total number of graduate teachers	1,81,320

NOTE.—The number of teachers in High Schools has not been shown in proportion to the number of pupils in the junior and senior stages for the reasons already stated.

	Rs.
1,81,320 non-graduate teachers at Rs. 61. 5 p.m. for 12 months	13,38,14,160
6¼ per cent. Contributory Provident Fund	83,63,385
33 1/3 per cent., average urban area allowance for half the number of non-graduate teachers	2,23,02,360
10 per cent. house-rent allowance for half the number of non-graduate teachers in rural areas	66,90,708
Expenditure on salaries and allowances of non-graduate teachers	17,11,70,613
1,81,320 graduate teachers at Rs. 118·7 p.m. for 12 months	25,82,72,208
6¼ per cent. Contributory Provident Fund	1,61,42,013
33 1/3 per cent. average urban area allowance for half the number of graduate teachers	4,30,45,368
10 per cent. house-rent allowance for half the number of graduate teachers in rural areas	1,29,13,610
Expenditure on salaries and allowances of graduate teachers	33,03,73,199
Total of salaries of graduate and non-graduate teachers	50,15,43,812
10 per cent. of the total of salaries to cover expenditure on Head-teachers, etc.	5,01,54,381
Other expenditure— (Loan charges, special services, books apparatus, administration, etc.).	23,64,42,083
Total gross cost per annum	78,81,40,276
Cost per pupil per annum	Rs. 109

The same basis has been taken for Technical High Schools as for High Schools of the normal academic type, though it may be expected that the former, particularly in regard to their senior departments, will be more expensive in view of the larger provision for practical instruction. On the other hand economies will be effected, if Technical High Schools are housed, wherever possible, in senior technical institutions and make use of the laboratories, workshops and specialist staffs provided there.

10. According to the present information in regard to Secondary Education in British India, the expenditure on High Schools for boys is met as follows:—

60·3 per cent. income from fees.

25·9 per cent. income from Government grants.

3·7 per cent. from Local Bodies.

10·1 per cent. from other sources (Endowments, etc.).

Government grants to girls' schools are higher and work out at 38·8 per cent. of the total expenditure. These figures, however, are the average for all the provinces and there is considerable variation among provinces in the matter of Government subsidies to High Schools.

In England, according to the report of the Board of Education for 1938, 46·9 per cent. of the pupils had a completely free education in grant-earning secondary schools and 9·7 per cent. paid a reduced fee. On this basis it is reasonable to assume that in the High Schools in India, 50 per cent. of the pupils will have to be provided with free places or with total or partial remission of fees with an equivalent financial effect. Out of a total of 72,52,920 pupils, 36,26,460 will therefore produce no fee income, while a similar number may be expected to pay towards the cost of their education. Since those required to pay fees will generally speaking belong to fairly well-to-do families, it is reasonable to take the average fee income at Rs.6 per mensem from each pupil; the total revenue from fees will thus amount to Rs. 26,11,50,120. This works out to about 30 per cent. of the total expenditure, so that 70 per cent. of the gross expenditure will have to be met from state aid and private endowments. In a country like India where private endowments for education are comparatively meagre, not more than 5 per cent. of the total expenditure can be expected from this source. This estimate is bassed on the present endowments for High Schools, which vary from 2 per cent. to

7 per cent. in British Indian Provinces. Thus if 35 per cent. of the total cost on High Schools is found from these two sources, the State will have to find the remaining 65 per cent. from public funds. The total net cost of the High School system outlined in this chapter will therefore amount to nearly Rs. 50 crores so far as British India is concerned.

11. The development of High Schools will inevitably depend on the expansion of Basic, and especially Junior Basic (Primary) Education and the rate of progress will be determined by the number of pupils brought under compulsory instruction in the lower stages. Although the existing primary schools may contain a number of boys and girls who would be fit and able to enter High Schools, if financial obstacles were removed, the main demand for increased High School provision will arise in the sixth year after a compulsory system of Basic education is introduced. Thereafter it will continue to increase until the peak is reached some forty years hence.

The High School is in one sense the backbone of a national educational system for it is to the High School that the country must look for the preparatory training of its leaders and experts in all walks of life.

12. **Summary of the main conclusions in this chapter:—**

(*a*) The High School course should cover six years and the normal age of admission should be about eleven.

(*b*) Entry to High Schools should be on a selective basis; only those pupils should be admitted who show promise of taking full advantage of the education provided. Additional places may be provided for those not selected provided that no cost falls on public funds.

(*c*) In accordance with the general principle set out in (*b*) above, places in High Schools should be provided for at least one child in every five of the appropriate age-group.

(*d*) In order to secure the right children, the methods of selection to be employed will require the most careful consideration. Special arrangements will have to be made for the transfer from Senior Basic (Middle) Schools to High Schools of suitable children and particularly of those who show signs of late development.

(*e*) High Schools should be of two main types (*a*) Academic (*b*) Technical. The objective of both should be to provide a good all-round education combined with some preparation in the later stages for the careers which pupils will enter on leaving school.

(*f*) The curriculum in all cases should be as varied as circumstances permit and should not be unduly restricted by the requirements of Universities or examining bodies.

(*g*) In order that no poor child of ability may be excluded, liberal assistance in the form of free places, scholarships and stipends should be available throughout the course.

(*h*) In order to secure teachers of the right type, the salaries paid in all recognised schools, whether maintained by the State or by private bodies, should not be less than those prescribed by the Central Advisory Board of Education.

(*i*) The estimated minimum net annual cost of the High School system outlined in this chapter when in full operation is Rs. 50 crores.

CHAPTER IV.—UNIVERSITY EDUCATION

1. In order to determine how far the Indian University system as it exists today is fitted to become the top storey of the national educational structure now in contemplation, a short survey of its historical development may be helpful. It began with the foundation in 1857 of the three Universities in the Presidency towns of Calcutta, Bombay and Madras. Within less than a century fifteen other Universities have come into existence. Of these 18 Universities 15 are located in British India, and 3 in Indian States. The present enrolment and distribution of students are shown in Appendix—Table D. Most Indian Universities were modelled in the beginning on the original conception of the University of London. Their main function was to conduct examinations for the benefit of a number of affiliated but largely independent colleges. But in more recent years important changes have taken place. Some of the affiliating Universities have undertaken teaching responsibilities, created research departments and provided residential accommodation. New Universities of the unitary type have also been established and an interesting experiment on new lines is now being tried at Delhi. The Hunter Commission of 1882, the Universities Commission of 1902, the Sadler Commission of 1917, the Hartog Committee of 1927 have all left their mark on the growth of Indian Universities.

2. In spite, however, of all the attention which has been devoted to the subject of university education and of the valuable contributions to human knowledge which have undoubtedly been made by Indian Universities, it cannot be said that as a whole they have yet realised the full aims and aspirations of a university education in the highest sense. Their standards of scholarship and discipline have come in for frequent criticism and one of the results has been that Indian students who have graduated at European or American Universities are often looked upon as superior to those who have obtained the highest degrees of Indian Universities. They have also failed to attract foreign students in any appreciable numbers, though the arrangements recently set on foot for the reciprocal exchange of teachers and students with Chinese Universities mark an interesting development. Much remains to be done before many of them can be regarded as fulfilling the true function of a University, which a high authority has defined in the following words:

> " A University aims at raising the intellectual tone of society, at cultivating the public mind, at purifying the national taste, at supplying true principles to popular aspiration, at giving enlargement and sobriety to the ideas of the age, at facilitating the exercise of political power and refining the intercourse of private life."

3. There are several respects in which the present state of affairs in Indian Universities gives cause for concern. The gravest of these is their failure to relate their activities sufficiently closely to the practical needs of the community as a whole. The Sapru Committee's report, published in 1935, showed the alarming extent of unemployment among University graduates. Even for minor posts in Government services before the war there were often as many as 60 to 70 applicants with University degrees. The economic system of the country may be mainly to blame for this situation, but the Universities cannot disclaim all responsibility. For apart from one or two recent attempts to set up Appointments Boards there is little evidence of any systematic attempt on their part to adjust their output to the capacity of the employment market to absorb it. Hundreds of young men, who have received a purely literary education, go about knocking at every office door without any clear idea as to where their proper vocation lies. In the competition for employment, the jobs for which boys with an ordinary High School education would be adequately suited are taken by University graduates. If a careful statistical survey were made of un-

employment among University graduates, perhaps not more than 20 per cent. would be found absolutely unemployed, but the numbers of those inadequately or unsuitably employed would probably exceed 50 per cent. This means that only 30 per cent. of the University products can be said to have secured employment of a type which is in keeping with their attainments or commensurate with the time and money which have been spent on their education.

Only a brief reference need be made to other defects to which attention has been called over a number of years. There can be no doubt that a great deal too much importance is attached to examinations and that the examinations themselves put a premium on book learning of a narrow kind at the expense of original thinking and real scholarship. It is not less true that over-crowded lecture rooms and over-worked lecturers are not conducive to that personal contact between students and teachers from which the greatest benefits of a university life may often be derived. The tutorial system is in a very embryonic stage in most Indian Universities. Nor do Colleges and Universities as a rule excite the same spirit of loyalty and obligation as is usual in other countries; the conception of a place of learning as an *alma mater* in the real sense is limited to comparatively few. While in many universities and many faculties, notably science, work of first class standard is being done, it cannot be said on the whole that Indian Universities are yet producing either in quality or quantity the leaders and experts in all phases of national life whom this country is likely to need urgently in the near future.

The real trouble in these and other respects lies in the fact that neither private benefactions nor grants from public funds have yet been on such a scale as to place universities in a position of financial stability. So long as they remain largely dependent on student and examination fees, they can hardly be expected to put such restrictions on admissions as would allow high standards to be maintained and the risks of educated unemployment to be minimised. Nor for the same reason are they able to finance new developments which might open up fresh avenues of profitable employment. There has been a general lack of planning in University education, and both Central and Provincial Governments have yielded to popular pressure in bringing Universities into existence without providing the necessary resources to enable them to function on sound lines. It has yet to be appreciated in many quarters that to run education on the cheap is the falsest of false economies. Moreover, Universities have been gravely handicaped by the fact that the education given in most high schools has been a very inadequate preparation for a University career. In the absence of any proper selection beyond what is provided by an admittedly easy matriculation examination, they have opened their doors to many students whom a more searching test would have debarred from entry. The position is further complicated by the absence of any general and liberal arrangements for assisting students of real ability who are prevented by poverty from seeking admission to Universities. Most Universities, beyond offering a few free places or scholarships to needy students, have no system of maintenance grants to enable such students to participate fully in university life.

An examination of the distribution of students in the principal faculties of the Universities for 1941-42 (see Appendix—Table D) reveals that out of a total of 43,742 undergraduates in the B.A. and B.Sc. classes, 32,972 are in the arts group, and less than one-third are in science faculties. Among the professional subjects, Law appears to attract many more than can expect to make a decent living by its practice. Universities have for many years followed the policy of unlimited admissions to courses of studies, especially in the case of arts, where an increased number of students has meant very little extension of financial responsibility.

4. The undeniable fact that there are many students in Universities today who should not be there, even though it may indicate that the present system is top-heavy, does not by any means prove that India is over-provided

with university education. An analysis of present statistics may be suggestive in this connection. According to the latest figures, while there are 4,54,140 pupils in the upper stage of the High Schools in British India, there are 1,63,408 students in the Universities. Many of these are there not because they have been found fit for higher education or have a thirst for knowledge, but because they found no opportunities for employment on leaving school and their parents gambled on the chance that their sons might discover a successful career after obtaining a University degree. The large number of failures in University examinations is by itself a sufficient indication of the numbers of those admitted to Universities who are unfit for University education. Out of 20,502 candidates who appeared at the B.A. and B.Sc. examinations of all the British Indian Universities in 1940-41, only 11,185 candidates passed and 9,317, or 46 per cent., failed. Probably nowhere among the Universities of the world is there so large a proportion of failures in examinations as in Indian Universities. Apart from the waste of time and money on the part of all concerned the social effect of so much disappointment cannot be other than deplorable.

Of the total number on the rolls of the British Indian Universities in 1941-42, 85,072 were in the Intermediate classes. If Intermediate students are not considered as forming part of the University organisation, one in five of the High School pupils goes to a University. If Intermediate students are included in the University, the ratio is reduced to one in three. If half the total of Intermediate students is included in the University and the other half is considered as part of the High School, one in four of the High School pupils is found to join the University. Even if all the pupils beyond the primary stage are considered as potential entrants to the University (their total number being 18,20,355), one in ten is found to seek admission to the University.

Of the examinees of the year 1940-41 in the three stages, 1,39,882 appeared for the High School examination, 47,599 appeared for the Intermediate, and 20,502 appeared for the B.A. and B.Sc., pass dergee examinations. The ratio of the three stages works out at 6 : 2 : 1. If the more precise method is adopted of following up the same batch of students through the three different stages, in 1936-37 the number of matriculates was 74,901; in 1938-39 the number of Intermediates was 22,660 and in 1940-41 the number of B.A.'s and B.Sc.'s was 11,185. The ratio still remains 6:2:1. The ratio of the Intermediate to the University stage will be slightly higher, if account is taken of those who join professional courses of studies after completing the Intermediate course.

In England and Wales the enrolment in High Schools for 1938 was 5,69,000 and the number of full-time students in Universities was 49,000. This works out at one in seven seeking admission to Universities. In pre-war Germany, there were 7,86,691 students in the Secondary Schools and 1,11,935 in Universities. The high proportion of students in Indian Universities as compared with the school-going population indicates that in India the superstructure of the educational system has been allowed to develop before the main building has been erected on broad and sound foundations.

If on the other hand the total number of University students is calculated in relation to the total population, it will be found that India is perhaps the most backward of all the principal nations of the world in University education. In pre-war Germany, the proportion of students in the Universities to the entire population was 1 to 690, in Great Britain 1 to 837, in the United States 1 to 225, in Russia 1 to 300, while in India it is 1 to 2,206.

There are 12 Universities in England for a population of 41 millions. In Canada, there are 13 Universities for a population of 8½ millions, in Australia 6 for a population of 5½ millions. In the U.S.A. there are 1,720 institutions for education of a University eype for a population of 130 millions while in India there are 18 Universities for a population of 400 millions. All this goes to prove that when India has a proper educational system, she will need more

University education and not less than she has at present, but the growth of Universities should be in proportion to the expansion in the lower stages and conditional on the introduction of a sound selective process in higher education.

5. The anomalous position of the Intermediate stage in Indian higher education has often been criticised. While most Universities provide a two-year Intermediate course of studies followed by an examination at the end of the stage, the students of the Intermediate classes are not recognised as undergraduates. In some places also there are Intermediate Colleges which have no direct connection with Universities at all but are controlled by Boards of their own. The two-year degree course, which normally follows the Intermediate offers inadequate scope or time for giving a sound and complete training in the subjects which the students select for specialisation. The Intermediate course of studies does not mark any definite stage in education and has for all practical purposes amounted to no more than an extension of the High School without any of the practial advantages which might be expected to accrue, if it actually formed a part of the High School. The Sadler Commission rightly recommended the abolition of this stage and the addition of one year to the High School course and the other to the University. This may be regarded as an essential and urgent reform.

6. There would appear to be no justification for suggesting that the Affiliating or the Unitary or any other type of University has shown itself to be specially suited to Indian needs. There is little to be said for uniformity at any stage of education and in a country so vast and various as India the need for constant experiment at all stages will be apparent. In the proposed reorganisation there is scope for all types. The Sadler Commission recommended the Unitary University as a better type than the Affiliating University, and it may be argued that where Universities of this type are feasible, they have certain definite advantages. Any attempt, however, to abolish the affiliating type of Universities will not solve the problem of higher education in India. Lord Haldane, who was at one time a convinced believer in the unitary type of University, came to the conclusion when he investigated the question of University reforms as Chairman of the Royal Commission on University education that affiliating and examining Universities are indispensable even in small countries like England. In a country like India, affiliating Universities are an economic necessity, and higher education cannot be concentrated in selected centres only. What may be practicable in certain cases is that affiliated Colleges should confine themselves to teaching up to the degree stage while University centres concentrate on post-graduate teaching and research. It is at any rate essential that the University itself as distinct from the Colleges should not be a purely administrative or examining body but should be in a position to establish standards of scholarship and stimulate teaching generally.

Any reorganisation of Indian Universities should, however, begin by defining the minimum duration of a University course of study. In 1934 and 1939 the Inter-University Board and the Conference of Indian Universities accepted the principle of a 3 years degree course, provided that the High School system could be so reorganised as to absorb the first year of the Intermediate course without any lowering of standards. In 1935 the Central Advisory Board of Education endorsed this opinion. In the previous chapter on the High School it has been proposed to extend the upper stage of the school course to three years instead of the present two, with the avowed object of raising High School standards ultimately to the present Intermediate level and so facilitating not only the introduction of a 3 years degree course in Universities, but also the raising of University standards as well.

It should be made clear that the Board regard three years as the minimum duration of any University course. They recognise that in certain subjects, e.g., Mtdicine, Technology etc. the normal course will necessarily cover a longer period.

7. Reference has already been made to the vital importance of a careful selection of students for University education. The joint committee of the Central Advisory Board and the Inter-University Board, which investigated in 1942 the question of the School Leaving and Matriculation Examinations, was of opinion that at the end of the High School stage, "there should be one examination designed with a two fold purpose (*i*) of testing the satisfactory completion of a course suited to the requirements of those who will pass directly from High Schools to occupations of various kinds, and (*ii*) of testing the suitability of those who desire admission to a University." This Committee was also in favour of a uniform range of subjects both for the School Leaving Certificate and Matriculation Examinations but felt that entrants for the latter should be encouraged to do specialised study towards the end of the High Schools stage. It was hoped that such an examination would lead to greater uniformity, since the standards set by the present School Leaving Certificate and Matriculation Boards vary widely at the moment from place to place.

8. Under the national system of education now proposed, out of an estimated total of over 33 lakhs of pupils of the IX, X and XI olasses in the High Schools, roughly 11 lakhs will be leaving school every year. Even if, as is to be hoped, the standards for entrance to the Universities are raised uniformly everywhere, it will still be reasonable to expect at least one in fifteen of the High School leavers to reach the level of attainment required for and to be prepared to embark on a University course. In case this ratio may appear illiberal as compared with what obtains at present, it must be remembered that under the proposed national system there will be between seven and eight times as many boys and girls in High Schools as there are today.

On the minimum basis of 1 in 15, Universities will be called upon to admit annually some 74,000 matriculates. With a normal 3 years course and adequate provision for postgraduate work includng research, approximately 2,40,000 places will be needed in Universities in British India. At the present moment (1941-42), if the first year students of the Intermediate Course are omitted, there are altogether only 1,21,484 students in all stages of the University course.

Attention must be drawn at this stage to the small number of women students in the Universities. Though all Universities without exception have admitted women to their courses of studies, examinations and degrees, the proportion of women students is still only 10 per cent. of the total. Many of the additional places to be provided should be filled by women, particularly in view of the large number of women teachers and doctors that will be required for any national schemes of education and health.

9. Closely connected with the selection of students is the problem of ensuring that the cost of University education does not become prohibitive in the case of poor students of ability. The solution is certainly not to cheapen University education further but to provide for the students in question the necessary financial assistance out of public funds. Besides a generous system of free places, those who cannot afford to maintain themselves at Colleges or Universities ought to be given a sufficient allowance to enable them to live free from want and to enjoy the same social amenities as other students. The Board have appointed a Committee to investigate the question of the award of scholarships and this Committee has accepted the principle that "something more than exemption from fees is nesessary to make education accessible to all." The Committee has also accepted the desirability of giving maintenance grants to not less than one-third of the total number of students in Colleges and Universities. The precise amounts and conditions upon which aid will be given will need to be worked out with due regard to local circumstances.

10. The total expenditure on education in all Intermediate and University classes amounted in 1940-41 to Rs. 4,63,83,971. Figures for the Intermediate as distinct from the University classes are not available. Of this total

39.4 per cent. was met from public funds, the balance coming from fees (47.7 per cent.) and from endowments, donations etc. (12.9 per cent.). The cost per student works out at an average of about Rs.300 per year but there is a great difference between one course and another. While the *per capita* cost of a medical student may be anywhere between Rs. 800 and Rs. 1,200 per annum, the cost of a student in arts may be as low as Rs. 100 to 200. For the purpose of an estimate the average cost under the reorganised system may be taken at Rs. 400 per student (excluding maintenance). This is approximately 33⅓ per cent. above the present average cost and makes provision for certain essential improvements in lecturers' salaries, reductions in the size of classes, more tutorial work, etc. For 2,40,000 places in Universities, the total estimated annual cost will thus be Rs. 9,60,00,000.

Against the estimated expenditure of Rs. 9,60,00,000 it may reasonably be expected that half the total number of students in Universities will be able to pay for their education at a rate of fee somewhat higher than at present say Rs. 20 per month. The revenue from fees will, therefore, amount to 1,20,000 × Rs. 240 = Rs. 2,88,00,000. This equals 30 per cent. of the total expenditure: 10 per cent. of the balance may be expected from private endowments, leaving the State to contribute 60 per cent. of the total gross expenditure on University education. Expenditure on Universities will be met as below:—

	Rs.
From Fee income	2,88,00,000
From Government grants	5,76,00,000
From Endowments	96,00,000
Total	9,60,00,000

If, however, a sum equivalent to 10 per cent. of the total cost of University education were to be set apart for maintenance grants for needy students, the State will have to provide 70 per cent. of the total expenditure, which is Rs. 6,72,00,000.

11. For reasons explicitly or implicitly given in this report Universities must play a part of supreme importance in any national system of education. This makes it essential that in the interest of economy and efficiency their activities should be carefully co-ordinated in order to eliminate over-lapping or dispersion of effort. It is not less important to ensure that their highly valuable products are distributed to the best advantage of themselves and of the community as a whole, and to make certain that funds are available for new developments and research, which the national interests may urgently require.

The formation of the Inter-University Board in 1925 was a desirable step in the direction of co-operation. The need for such a body was first stressed by the Sadler Commission in 1921, and was endorsed by the Lytton Committee. Though this Board has been doing work of considerable value, it is a purely advisory body and does not possess the authority which would enable it to co-ordinate university development in the ways or to the extent which a national system will require. It is not within its competence to insist on the raising of standards where this is obviously required or on the establishment of the conditions of services including remuneration, which are necessary to secure teachers of the requisite calibre. Nor is it able to restrain unhealthy and uneconomic rivalry between universities in regard to new developments to prevent the creation of new universities, the need for which has not been established or to counteract the provincial outlook which puts obstacles in the way of students seeking facilities for study which are not available in their own areas. Above all, it is not invested with any power of the purse. It would appear, therefore, that some authority is needed, which would co-ordinate university education in the interests of the country as a whole. It is not suggested that such a body should be directly or indirectly under the control of the Central Government, even though the financial implications of educational reorganisation may ultimately make it desirable that the Central Government should relieve Provincial Governments to a large extent of financial responsibility for university education. It should also refrain from any interference in the ordinary administration of individual universities. What is contemplated is something on the lines of the University Grants Committee in Great Britain, a body which has operated with admitted success and without friction in a country where Universities are at least as jealous of their autonomy as Indian Universities. This Indian University Grants Committee, which should be constituted by Statute, should consist of a few eminent persons not directly connected with Government, whether Central or Provincial, or with any particular University, though for obvious reasons it is desirable that they should have considerable experience of University administration. Its main function will be to exercise a general supervision over the allocation of grants to Universities from public funds with the object of ensuring that Universities are in a position to meet the demands which may be made upon them. To enable them to plan ahead, financial assistance from public funds should take the form of block grants for a period of years. It is not proposed that Provincial Governments should cease to make grants direct to their local universities, unless they would prefer to do so through the University Grants Committee. It is, however, suggested that when a Provincial Government desires to make a grant to a University for any substantial new developments, it should first consult the University Grants Committee. All grants to Universities for new developments by the Central Government should be made through the Grants Committee.

In addition to its main function, the Grants Committee should also be empowered :—

(*i*) to encourage private benefactions;

(*ii*) to co-ordinate University activities with a view to avoiding overlapping and to adjusting so far as possible the output of the Universities to the economic needs of the country;

(*iii*) to prevent undesirable competition between Universities, and to remove all inter-provincial barriers;

(*iv*) to visit Universities periodically with a view to ascertaining their needs at first hand;

(*v*) to establish cultural contacts and to arrange for the exchange of teachers and students with foreign Universities.

12. Summary of the main conclusions in this chapter:—

(*a*) Indian Universities, as they exist to-day, despite many admirable features do not fully satisfy the requirements of a national system of education.

(*b*) In order to raise standards all round, the conditions for admission must be revised with the object of ensuring that all students are capable of taking full advantage of a University Course. The proposed reorganisation of the High School system will facilitate this. Adequate financial assistance must be provided for poor students.

(*c*) The present Intermediate course should be abolished. Ultimately the whole of this course should be covered in the High School but as an immediate step the first year of the course should be transferred to High Schools and the second to Universities.

(*d*) The minimum length of a University degree course should be three years.

(*e*) The tutorial system should be widely extended and closer personal contacts established between teachers and students.

(*f*) The importance of establishing a high standard in post-graduate studies and particularly in pure and applied research should be emphasised.

(*g*) Steps should be taken to improve the conditions of service, including remuneration, of University and College teachers where those now in operation are not attracting men and women of the requisite calibre.

(*h*) An Indian University Grants Committee should be constituted for the purposes and with the terms of reference set out in this chapter.

(*i*) To provide for the increased number of able and well-prepared students which a national system of High Schools may be expected to produce, approximately 2,40,000 places, or double the existing number, should be available in Universities.

(*j*) The estimated total net annual cost of the scheme for University Education set out in this chapter when in full operation is Rs. 6,72 lakhs.

CHAPTER V.—TECHNICAL, COMMERCIAL AND ART EDUCATION

1. In the winter of 1936-37 two educational experts from England, Messrs. Abbott and Wood, visited India and produced a report, which for an educational report has attracted very considerable attention both in this country and outside. Mr. Abbott, who until a year or so previously had held the office of Chief Inspector of Technical Schools under the Board of Education, England, may be regarded as a world authority on many aspects of technical instruction and that part of the Abbott-Wood report for which he is responsible should be read in close connection with this chapter, as it will shed much light on the urgent problems under discussion here. In fact Mr. Abbott has dealt so thoroughly with the duration, scope and content of most of the courses that should be provided in Technical Institutions, that no attempt will be made to cover the same ground again. This chapter will, therefore, confine itself mainly to certain events and their corollaries which have occurred since the Abbott-Wood report was written and, as the Board's Committee on Technical Education has pointed out, to a certain extent modify its conclusions. The first of these is the war, which has already radically altered the Indian industrial system as Mr. Abbott saw it and is likely to have still more far-reaching effects in a few years' time. The second is the publication of the report of the Consultative Committee of the Board of Education, usually called the "Spens' Report",* which in advocating the need for the widest variety of curriculum for children at the High School stage emphasised the cultural and vocational value of a new type of school, called by the not very inspiring name of 'Technical High School'. The success, which experimental schools of this kind have already achieved in England in ensuring to Industry and Commerce their fair share of the best brains of the country, gives grounds for hope that they may satisfy in this country also a need which is already urgent and is likely to become more so in the post-war period, if present anticipations in regard to industrialisation are realised.

2. It is reasonable to assume, if there can be any confidence in human foresight, that there will be an urgent need for a considerable expansion in this branch of education in the post-war period. Hitherto the demand has been restricted partly by the limited number of openings which have been available in Industry and Commerce and partly by the practice of filling the more remunerative posts with imported technicians. The supply of suitable students has been adversely affected not only by the uncertainty of subsequent employment but also by the fact that young Indians of the middle and upper classes have not in the past taken readily to industrial occupations. The instruction itself has not escaped the over-academic atmosphere which characterises education generally in India nor has it been linked up closely enough with the actual conditions obtaining in works and factories. What it is fashionable to call a vicious circle has been described by Mr. Abbott in the following words:—

"No country can initiate and carry on industries on a large scale, unless it has an adequate supply of men specially trained for the direction and management of large industrial concerns as well as of others qualified for the minor but very important supervisory posts in them. On the other hand it cannot be expected that capable and ambitious men will devote themselves to acquiring this special knowledge and skill unless they see a reasonable prospect of exercising it and gaining a decent livelihood thereby."

The experience of the war, however, has already led to a number of salutary changes; it has compelled a large expansion of industry and created a greatly increased demand for technicians of all grades, while at the same time the urgent need for skilled and semi-skilled workers had led to almost every technical institution in the country becoming a centre for Technical Training Schemes. Many young men, who would not otherwise have embarked on a technical career, have been recruited under these schemes and the prejudice against industrial employment has been steadily breaking down. This process is likely to be accelerated when Technical High Schools become an established part of a selective High School system. The ground is, therefore, being rapidly prepared for developments on practical and up-to-date lines but before any attempt is made to forecast the nature and scope of these developments or the precise lines which they should follow, it is necessary to define in relation to the requirements of a modern community the function of technical instruction, including the cognate subjects of education in Commerce and in Art as applied to Industry and Commerce.

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* Report of the Consultative Committee on Secondary Education with special reference to Grammar Schools and Technical High Schools (1939).

3. The conception of the function of technical education, as regards both its aim and its content, has been considerably revised and enlarged in Western countries during recent years. Consequently it is important to emphasise from the outset that any scheme for the development of technical instruction as an integral part of a national system must have a two-fold character. It must both form a link between education and industry and it must at the same time receive quite separate consideration as a form of mental training which is especially suited to certain types of intelligence, irrespective of their future occupations.

The primary function of technical instruction remains and is likely to remain that of satisfying the needs of industry and commerce for (*a*) skilled craftsmen, (*b*) intelligent foremen and executives, and (*c*) research workers. In Western countries, however, of late years the content of a technical curriculum has been steadily widening, due on the one hand to increased demands on the part of industry, created not only by accentuated competition but also by the emergence of entirely new industries and on the other hand to a somewhat tardy recognition on the part of those responsible that technical education, if it is to be really fertile, should include the study of design and distribution as well as the actual processes of manufacture. The industrial product of today to command a market must do its work efficiently, must be attractive to the purchaser and must pass easily and cheaply from the maker to the consumer.

Moreover, the changes which are affecting the character of what is produced are also determining the training of those engaged in production. The ranks of the skilled craftsmen, depleted by the advent of the machine and mass production, are being reinforced by the makers and menders of machines and machine tools. Training in precision work has already acquired an importance out of all proportion to the number of men so employed. New problems, again, both human and material, call for more sympathy, more imagination and a deeper insight into the processes they control from those placed in positions of authority. In his turn the research worker has not merely to concern himself with improvements along established lines; it is also his business now-a-days to explore how a dying industry may be revived or a new one created. It has been assumed, perhaps too readily during the last fifty years, even by those who for social reasons deplore their extinction most keenly, that the small business and the cottage industry are bound to be eliminated by the large scale factory. Modern methods of distribution and marketing, however, now give grounds for hope that even in highly industrialised countries the small producer may survive and prosper alongside of his larger rival.

The obvious lesson implicit in these changes is that technical instruction today must be a wider and more liberal form of training than it has been in the past; it must comprehend the scientific principles underlying the processes of manufacture as well as the processes themselves; it must link up the sciences of production and business organisation with the arts of design and salesmanship. It must take cognisance also of a social science in relation to the effect of industrial development on the life of a previously non-industrial community and it cannot even neglect the provision of purely cultural and recreational facilities as an antidote against mental and moral stagnation for those workers who are destined to remain the semi-skilled servants of the machine.

4. At the same time contributing towards the same enlarged conception there is a secondary function of technical instruction, the importance of which is being increasingly recognised abroad and has received striking emphasis in the recent report of the Consultative Committee of the English Board of Education (the Spens' Report). So-called technical subjects have been found to be capable of providing an all-round education or culture as distinct from a vocational training for the many people, not necessarily by any means the less intelligent, whose mental faculties are more actively stimulated and more fully satisfied by practical than by academic studies. In this sense the technical school or college has a valuable contribution to make towards the introduction of greater variety into education at its higher stages and towards satisfying the need of industry for a reasonable share of the best brains of the community, which under the influence of the conventional high school seek professional occupations and too often find unemployment. Further, it may provide many people who were not suited for or were prevented by the economic exigencies of life from taking a university course of the ordinary type, with knowledge of the things necessary to the fuller discharge of their duties as citizens or the more profitable employment of their leisure.

5. While the general influences affecting the development of technical education, which have been outlined above, have been felt most strongly hitherto in countries remote from India in distance, in natural resources and in the social and economic conditions under which the great mass of their people live, their practical bearing on the future trend of development in this country can hardly be doubted. If the fillip which the war has given to industrial development is to be maintained and consolidated, it is difficult to think of any country where a real partnership between education and industry is more essential or where it is more important to help the small business or the cottage industry, to increase the supply of skilled craftsmen and competent executives, to convert abundant raw materials to the service of the country which produces them and above all to check the flow of potentially creative intelligence through academic channels into the slough of unemployment.

6. Considered from the point of view of the students, technical instruction will be either pre-employment or post-employment, that is, it will either be directed to giving young people not yet at work a preliminary training which will prepare them for entry into industrial or commercial occupations or it will afford opportunities to those already in employment for increasing their skill as craftsmen, for fitting themselves to occupy positions of greater responsibility or for improving their all-round equipment as citizens as well as workers.

The size of the area to be served and the extent and nature of its industrial development will determine whether such instruction should be provided in one institution or in several. If in several, then similar considerations will indicate whether these institutions should each serve one industry or group of industries or whether there should be a central institution at which the more advanced work in all branches should be concentrated, with ancillary schools, conveniently distributed, which will relieve it of the more elementary work and feed it in turn with suitably prepared students. The question of monotechnics *versus* polytechnics has been a controversial issue over a considerable period but the polytechnic, wherever practicable and subject to certain exceptions to be mentioned below, has a strong balance of educational, industrial and economic argument in its favour. It is indeed hardly necessary to elaborate the case for concentrating provision for technical instruction, and particularly the more advanced branches of it, under one roof. There is in the first place the factor of cost. Technical instruction is necessarily expensive, owing among other reasons to the large amount of practical work involved and the cost of the plant and apparatus required. Secondly, there is the importance of economising teaching power, since competent instructors in many of the more advanced technical subjects are always difficult to obtain. A third argument for centralisation arises from the fact that many technological courses over-lap to a certain extent and in a large institution the same workshop or laboratory may be used by students taking different courses. The last but by no means the least important consideration is the benefit students derive from being brought into contact with others engaged in different occupations and studying different subjects.

The monotechnic is to be preferred only where an industry is highly localised, or where its needs are so complicated or peculiar that it is difficult to satisfy them in the same building as those of other industries or where the material to be dealt with, as for instance in training, makes it an uncomfortable neighbour.

Accommodation should be provided in the polytechnic, whether it has ancillary institutions or not, for (*i*) a full-time day school (Technical High School) for boys of the normal high school age and type, whose training will be based on the assumption that they may rise ultimately to positions of responsibility, (*ii*) part-time classes preferably in the day but when necessary in the evening both for younger employees (including apprentices) and for older workers, and (*iii*) classes, full-time or part-time, for more advanced students and for research workers. Finally there should be provision for adult education of a non-vocational kind.

7. The next step is to apply what has been said above about the general aim and content of technical (including commercial and art) instruction to the post-war conditions of India, so far as it is possible to forecast them. It is clear that the amount, type and location of facilities for technical education will largely be determined by the requirements of industry and commerce but it is by no means clear at this stage what these requirements are going to be. It is true that war time production has broken the vicious circle in which industrial development in India has been enclosed in the past. New industries are now being established and the nucleus of a supply of labour for them has been created.

The first task will be to recondition for absorption in civil industry the large number of technicians who have been through an intensive short course of training for war production. It is impossible to say how many of these by the end of the war will have reached the standard of skill and adaptability which will enable them to fit easily into the post-war system. This applies both to the men enlisted in the technical branches of the Fighting Services and those employed in civil factories. It is, however, satisfactory to know that Labour Department's Technical Training Centres will be kept going for 18 months after the war in order to complete the training of these workers where required.

Though it is impossible to say how many technicians will be required in each main employment category in industry and commerce, it is possible to prescribe the categories themselves and the sort of training their members will require. In the highest category there will be the chief executives as well as the research workers of the future. These will normally have their preliminary training in a Technical High School and will then pass to the Technological Department of a University or to a full-time course of a National Diploma type in a Technical Institution. This category will necessarily be a small one and it should not require much extra provision but in view of its importance admission to it should be the outcome of a very strict process of selection. Reference should be made to the report of the Board's Committee on Technical Education for a discussion of the question of the relationship between the technological courses of Universities and those conducted in Senior Technical Institutions, which may or may not be affiliated to or connected with Universities.

The next category will contain the minor executives, foremen, charge hands etc., a very important class, if only in view of the difficulty which Western countries have experienced in recruiting the right kind of people. It is the main aim of the Technical High School to satisfy this need but the Technical High School pupil on completing the course there will need to continue his technical education either by taking National Diploma or Certificate Course or by attending part-time classes of a fairly advanced description.

Mr. Abbott has emphasised again and again, and few will disagree with him, the need for concentrating on what may be called the supervisory grade. It is this grade, intermediate between the management and the operatives, "which ought to have sufficient knowledge and intelligence to understand the instructions of the former and sufficient powers of expression to communicate and interpret them to the latter. At the same time they should have sufficient practical skill to earn the respect and confidence of the operatives whose work they direct, control and supervise."

The third category will comprise the skilled craftsmen, most of whom, will not aspire to executive positions. These may be recruited from ex-Technical High School pupils but as a rule after passing through the Senior Basic (Middle) Schools, where they will have mastered the rudiments of craft work, they will go on to Junior Technical, Trade or Industrial Schools for a further two or three years full-time course.

/ Below these three categories will come the great mass of semi-skilled and unskilled labour. These will not as a rule receive any special technical training before entering employment apart from the craft work they will have done in the Senior Basic (Middle) School. The fact must not be overlooked that boys and girls who have passed through the basic schools will be much better prepared to enter industrial occupations than most of those who now leave Primary and Middle Schools. They should at least know something of the use of tools and the properties of woods and metals. It will, however, be very important to afford them facilities both for continuing their general education and for improving their skill, so that the best of them may ultimately ascend to the skilled class.

It should be made abundantly clear that the rough classification given above does not presuppose a rigidly horizontal organisation of post-war industry. If the necessary incentives are to be provided, promotion must remain open from the bottom to the top and this will be particularly important until the selective system of higher education has been firmly established. Nor must the needs of small business or rural industries be forgotten. For the latter separate departments in suitably located Technical Institutions should be provided, where local crafts can be taught and practised under appropriate conditions.

8. While the foregoing refers mainly to technical education, it also covers the general provision to be made for commercial and art students. In regard to commercial education it may be possible to reduce those concerned to two main groups (*a*) those who will transact business on an important scale or perform professional functions such as banking, accountancy etc., and (*b*) those engaged in recording the transactions of Group (*a*). According to Mr. Abbott, Group (*a*) require mainly a training in imagination, initiative, administration and leadership while Group (*b*) need training in the ordinary office arts, *e.g.*, shorthand, typing, book-keeping, commercial practice etc. as well as in alertness, accuracy and a sense of responsibility. It is possible that Mr. Abbott somewhat underestimates the need for expert knowledge in those controlling the great processes of salesmanship and distribution. With regard to Art as applied to Industrial and Commercial requirements he gives voice to a well justified criticism when he says "Nothing has disappointed us more than the general neglect of the teaching of Art." Indian manufacturers will be very wise to devote far greater attention to the artistic qualities of goods produced. One of the great advantages of a Polytechnic is that it brings those engaged in

manufacture into immediate contact with those studying design and distribution.

9. In the absence of any reliable data which would indicate the probable number of workers required in each of the three categories which will need technical instruction, purely hypothetical figures must be taken for the purpose of a preliminary estimate of the cost of an adequate system of Technical Education.

So far as potential research workers and aspirants to the most senior executive grades are concerned, it may be assumed that many of these will pass through the technological degree courses and provision has been made for them under the heading of Universities. It may be well, however, to emphasise at this point the necessity for ensuring that in the University technological departments ample facilities are provided for research directed towards the solution of practical industrial problems and that the need for testing the results of laboratory experiments on a commercial scale is not overlooked. It is not less important that technological degree courses generally should be made more practical than they are at present and that the students should spend a considerable part of their time throughout the course, and not merely at the end of it in works and factories. The same applies to commercial students. A further desideratum is that as many students as possible, and particularly those likely to become technical instructors, should be afforded facilities both for studying abroad and for obtaining first-hand experience of foreign industrial and business methods. In addition to those who proceed to Universities, it may be taken for granted that a considerable and increasing number of the would-be entrants to the two higher categories of industrial and commercial work will on leaving Technical High Schools seek to qualify for higher posts by taking full-time courses of the National Diploma type in Technical Institutions or advanced part-time courses of equivalent standard. Provision is accordingly suggested for 75,000 places in Technical Institutions, apart from Universities, which will cater for an intake of 25,000 students annually or approximately 4 per cent. of the boys leaving High Schools every year. The cost per place is estimated at Rs. 500, and this should leave a margin to cover the comparatively small number who may be expected to remain another two years for an Advanced National Diploma course.

For the third category, the skilled artisan class, recruits will mainly be drawn from those who have completed their course at a Senior Basic School and pass on to Junior Technical, Trade or Industrial Schools, though there should also be a steady flow from Technical High Schools as the numbers of these increases. In view of the importance which will be attached to craft work in the Senior Basic School, it is reasonable to expect that after two years in a Junior Technical, Trade or Industrial School boys will have attained to a standard of skill sufficient to warrant their admission to skilled trades as apprentices or learners. Pending the full establishment of Senior Basic Schools, this training may require three years. On the basis, however, of a normal two years course, it is proposed to provide 2 lakhs of places in Junior Technical, Trade and Industrial Schools, which will accommodate about 4 per cent. of the boys leaving Senior Basic Schools each year. The cost per place is estimated at Rs. 150.

10. Apart from the recommendations set out above which concerns the provision of full-time instruction, it is reasonable to assume that as industrial development takes place, whether in the form of large scale or village industries, an increasing number of workers will continue their technical education on a part-time basis by attending classes either in the day or the evening. The drawbacks to evening classes are well-known and owing to climatic and other conditions they are likely to be greater in India than in Western countries. Nevertheless, it is fair to record that many people who today occupy positions of responsibility in Industry all over the world owe their success to attendance at evening classes. Those who give up part of their leisure after a day's work in order to improve their qualifications

at any rate suggest that they possess the qualities of grit and determination that make for success in life. Part-time day classes, or the sandwich system, which is an extension of the same idea, on the other hand constitute a factor of great importance in any modern scheme for technical education. Their main advantages may be summarised as follows:—

(1) They minimise fatigue on the part of students.

(2) They bring the efficiency of the instruction under the criticism of students who have some first hand knowledge of the requirements of modern industry.

(3) They enlist the direct interest of employers inasmuch as they are releasing and, it is to be hoped, paying their employees to undergo instruction during their ordinary working hours and consequently expect to derive some practical benefit from the sacrifice they are making.

In spite of some initial opposition progressive employers in Great Britain have become convinced of the benefits of the part-time day system not only to their employees but also to themselves, and it is now the practice of many firms to release their younger employees to attend technical classes on two half days or one full day a week at the expense of the firm, which pays not merely the class fees but also the employees' wages during the time spent under instruction. The sandwich system, which is most suitable for the higher grades of workers, means that the employee instead of attending classes for a day or two half days a week, divides the year between the works and attendance at a Technical Institution. The adoption of such a system would be of particular value in India, as it would help to counteract the present over-academic tendency of too many technical courses, whereby a student may spend several years under instruction without obtaining any first hand experience of actual factory conditions. It is to be hoped that Indian employers will quickly recognise the value of the part-time day system; if not, it may be necessary to stimulate their interest by levying special tax for the further education of their employees, as was done in France after the last war, on those employers who do not provide the necessary facilities themselves.

11. In addition to the provision of facilities for training skilled artisans and the superior grades, an up-to-date system of Technical Education must also cater for those in the lower grades who wish to improve their equipment as workers and as citizens. The conception of a modern Polytechnic as a People's University has already been referred to and this idea is capable of very wide development in all thickly populated districts.

At this stage the sphere of Technical Education will overlap that of Adult Education, which will also be engaged in the provision of vocational classes. Some demarcation will arise from the fact that Technical Institutions, apart from Agricultural Institutions, which should really be regarded as a part of Technical Education, will normally be found only in urban or thickly populated districts, whereas Adult Education should cover the whole country. At the same time, as the Adult Education Committee has pointed out, it is neither possible nor desirable especially in India, to draw too strict a line between the spheres of Technical and Adult Education. It will be the business of the responsible administrative authority to prevent unnecessary overlapping.

It is quite impossible to forecast the extent of the demand for part-time classes or to estimate their cost. The provision of such facilities in other countries has proved so remunerative in the widest sense that it is justifiable to lay down the general rule that where any reasonable demand arises, every effort should be made to satisfy it. Provision has been made for an annual expenditure of Rs. 300 lakhs on part-time technical classes in addition to any provision that may be made for such classes under the head of Adult Education, but it must be emphasised that this is no more than a token figure. This brings the estimate of the total annual gross cost of Technical, Commercial and Art Education to Rs. 9,75 lakhs. Expenditure on Technical High Schools and the Technological Departments of Universities is provided for under High Schools and Universities respectively. The uncertainty as to the extent of the development in Technical Education in India after the war adds to the normal difficulty of arriving at any firm estimate in this branch of education. The same applies to the question of fee and other income. On the one hand the bulk of those undergoing full-time instruction will not belong to the richer sections of the community; on the other hand many of the students attending part-time classes will be in employment and may be expected to pay a reasonable fee. Here also as in other branches of Higher Education, liberal provision must be made for the remission of fees in the interest of poor students. Maintenance allowances will also be necessary, if not on the same scale as in the case of Universities. It may be assumed that the total annual income from fees and other sources *e.g.*, trade tests, or expert advice for firms, will not exceed Rs. 1,75 lakhs.

12. The teacher in Technical, Commercial and Art Institutions will be no less important than the teacher in other branches of education. To create an adequate supply of such teachers will be still more difficult because of the direct competition of Industry and Commerce and the greater inducements they are in a position to offer to skilled workers. This fact must be borne in mind in determining the remuneration and conditions of service likely to attract efficient instructors. The Board have adopted the following scales recommended by their Technical Education Committee and hope they will be successful in attracting enough teachers of the requisite calibre.

(*a*) Teachers of general subjects in Technical High Schools—same grades of pay as in ordinary High Schools, with upto five increments for suitable industrial or commercial experience.

(*b*) Teachers of technical subjects:—

(*i*) Workshop or Laboratory Assistants—Rs. 50—1—75 p.m.

(*ii*) Teachers Class III—Rs. 75—5—150 p.m.

(*iii*) Teachers Class II—Rs. 175—10—325 p.m.

(*iv*) Teachers Class I (including Heads of Departments)—Rs. 400—25—1,000 p.m.

(*v*) Principals—Salary according to nature and size of institution.

For Teachers in Classes II and III an allowance of upto 50 per cent. of their salary may be made to meet higher cost of living or other special circumstances.

Recruitment and training on the other hand present a smaller administrative problem than in the case of other branches of education. No special training schools or colleges are required. The technical or commercial teacher should have had first-hand experience in industry and commerce and should then receive his professional training in a technical institution.

13. While the extent and character of the post-war demand for Technical Education must remain problematical, it is possible to make definite proposals as to the lines on which it should be organised. There can be little doubt that development hitherto has suffered from the lack of any unified direction either in the country as a whole or in individual Provinces. In some areas technical education is regarded as the responsibility of the Education Department but in most cases the control entrusted either to Labour or Commerce or Industries Departments. In at least one Province some technical institutions are under the Education Department while others are controlled by one or more of the other Departments mentioned above. It is obvious that such an arrangement cannot make either for efficiency or economy. Technical instruction, particularly in the more advanced stages, is expensive and the necessity for avoiding overlapping or dispersion of effort will be apparent. It is equally clear that this branch of education should be closely linked up with industry and commerce, whose needs it is designed to serve. Recognition of this no doubt led to

the control of technical education being given to the Departments which deal directly with industry and commerce. In actual practice, however the object in view has not been achieved.

For the reasons referred to earlier in this chapter, technical instruction regarded as a means of general education as well as a preparation for certain types of employment is acquiring a place of ever-increasing importance in the educational system. Since its function is primarily educative, its direction should be in the hands of those responsible for education as a whole. As Mr. Abbott points out, "In nearly every great industrial country .... technical education and general education are administered by the same department of State, *i.e.*, the Ministry of Education." The closest contact must of course be established and maintained with Industry and Commerce and since they will increasingly depend on the products of technical institutions, it is in their interest to become willing cooperators as well as constructive critics of the instruction given therein.

14. While, therefore, technical education should be in the hands of the education authorities, there is reason to doubt whether under modern conditions it can be effectively organised on a Provincial basis. If there is to be the essential contact with industry, technical institutions should be located as near to industrial areas as possible. The result of this will be that some Provinces will contain many more technical institutions than others and it is unfair that they should be saddled with a disproportionate share of what is clearly a national burden. At the same time there is an even more serious consideration. While for economic and other reasons industry and commerce and the technical institutions which serve them, may be concentrated in certain areas, it is clearly inequitable and contrary to the national interest that entry to industrial occupations should be mainly confined to students who live in or near the areas in question. Suitable students who desire to qualify as technicians should have the opportunity to do so, whereever they may live. Under a provincial system, however, experience of the past suggests—and there is no valid reason for anticipating a change of attitude in the future—that priority in regard to admission will certainly be given to students from the Province providing the institution, even if those from outside are not actually excluded. Moreover, if there is likely to be substantial industrial development in the post-war period, even though the precise form or forms it may take cannot at present be foreseen, the need for planning on a national basis becomes still more obvious. To stimulate, coordinate and control the provision of the educational facilities, which such a development as well as existing industry will need, there must be an All-India body in supreme charge. In a service which calls for so many experts it is difficult to expect each Province to maintain a staff capable of inspecting and advising Technical Institutions of the first rank.

It is satisfactory to record that an Association of Principals of Technical Institutions in India has recently been formed with the object of formulating a national policy in technical education and establishing All-India standards for courses in the major branches in instruction. The A. P. T. I. (India) is, however, hardly the body to exercise the final administrative control over technical education, though it should be given an important voice in it. It is accordingly suggested that a National Council for Technical Education should be established. It should comprise nominees of the Central Advisory Board of Eucation, on which all Provinces are represented, of the A. P. T. I. (India), of the Departments of Government, Central and Provincial, directly concerned with industrial problems, of the University Grants Committee proposed in another chapter and the Inter-University Board as well as of recognised Associations of Employers and Employees. This Council will control policy in Technical Education generally and deal with all technical institutions except the Technological Departments of Universities. and Technical High Schools and Junior Technical Schools which, since they have a purely educational as well as a pre-vocational function, should remain part of the ordinary Provincial system. It is a corollary to this proposal that the whole cost of Technical Education, apart from the exceptions mentioned above, should be borne by the Central Government.

15. Reference may be made before concluding this chapter to two very important branches of education which receive very little notice in this report. These are (*a*) Agricutural Education and (*b*) Day Continuation Schools. With regard to the former it is logically a part, and a most importtant part of Technical Education. In this country with its vast agricultural population, as Senior Basic Schools and High Schools with an agricultural bias become more widely spread, the more advanced stages fo Agricultural Education should be closely linked up with the lower, and Agricultural Colleges of every type should be regarded as essential parts of the top educational storey and should come under the general control of the Education Authorities. The Board have decided to set up a Committee to explore this question. With regard to the latter the importance of part-time day classes for the younger employees in this country has been stressed in this chapter. The value of Day Continuation Schools for all boys and girls between the age at which compulsory full-time education finishes and 18—20 has usually been argued on the ground of their contribution towards general, moral, mental and physical well-being during a crucial phase in development rather than any direct contribution towards industrial efficiency. The practical difficulties which have held up their compulsory introduction in England are still greater in India and it may be well to defer establishing them until a universal system of Basic Education is fully in operation.

16. The main conclusions contained in the report of the Technical Education Committee are set out below:—

(1) In view of the recent expansion of industry and the likelihood of further development after the war it is necessary to plan immediately a comprehensive system of technical education at all stages.

(2) The function of Technical education may be described as two-fold, (*a*) to meet the needs of industry and commerce for properly trained workers of all grades and (*b*) to provide a suitable form of education for those boys and girls whose natural abilities can best be developed by instruction on practical lines.

(3) Technical education should be regarded as an integral part of any educational system and as in no way inferior to education of the academic type.

(4) Education from the earliest stages should be given a more practical character, and the curriculum should aim at making boys and girls familiar with practical as well as academic subjects.

(5) Technical education must include commercial education and art in relation to industry.

(6) Agricultural education should be ragarded as an essential branch of technical education. Senior Basic (Middle) as well as High Schools in rural areas should have an agricultural bias.

(7) In view of the great importance of agricultural education for this country a special committee of educational and agricultural experts should be set up to consider the subject fully.

(8) In order to provide suitable instruction and training for the different types of workers required there should be the following main types of technical institutions:—

(*a*) Junior Technical or Industrial or Trade Schools.

(*b*) Technical High Schools.

(*c*) Senior Technical Institutions.

(*a*) and (*b*) will normally provide full-time instruction preparatory to employment, while (*c*) will also provide part-time instruction for those already in employment.

(9) The type and duration of part-time instruction should be determined in consultation with employers and according to the needs of the locality. It is desirable that part-time classes should be held during the day rather than in the evening.

(10) Wherever circumstances permit, polytechnics are to be preferred to monotechnics.

(11) The following courses of studies should be provided in technical institutions:

(i) a two-year full time course in Junior Technical or Industrial or Trade Schools, to which pupils should be admitted on leaving the Senior Basic (Middle) School at the age of about fourteen,

(ii) a six-year full-time course in Technical High Schools, to which selected pupils will be admitted on completing the Primary (Junior Basic) stage at about the age of eleven. The first three years of the course wil be mainly devoted to general subjects,

(*iii*) a three-year full-time Diploma course in Senior Technical Institutions, to which students will be admitted after passing the final examination of a Technical High School or an equivalent examination,

(*iv*) a two-year full-time Advanced Diploma course in Senior Technical Institutions, for those who have passed the above examination,

(*v*) a three-year part-time Certificate course in Senior Technical Institutions, for students already in employment, and who possess the Technical High School Leaving Certificate or an equivalent Certificate.

(*vi*) a two-year part-time Advanced Certificate course for those who have passed the above examination, and

(vii) classes in individual arts, crafts and other subjects related to Industry and Commerce for which there may be a sufficient demand.

(12) There should be only one external examination at the end of a course. Other examinations should be conducted internally.

(13) All teachers in technical institutions should have some first-hand experience of some branch of industry or commerce.

(14) (*a*) Teachers of general subjects in Technical High Schools should receive the same grades of pay as teachers in ordinary High Schools. They may be granted up to five increments for appropriate industrial or commercial experience after the age of twenty.

(*b*) Teachers of technical subjects should receive the following scales of salaries:

(*i*) Workshop or Laboratory Assistants—Rs. 50—1—75 p.m. The initial salary should be fixed according to experience.

(*ii*) Teachers Class III—Rs. 75—5—150 p. m.

(*iii*) Teachers Class II—Rs. 175—10—325 p. m.

(*iv*) Teachers Class I (includng Heads of Deptts.)—Rs. 400—25—1,000 p. m.

(*v*) Principals—Salary according to the nature and size of the institution.

Teachers in Classes II and III may be in certain areas be given an allowance of upto 50 per cent. to meet the higher cost of living or other special circumstances. There should also be a limited number of posts of special responsibility carrying an allowance of Rs. 25 p.m. These will normally be limited to teachers in Class II and Class III.

(15) All teachers of technical subjects should be encouraged to keep in touch with the appropriate branch of industry or commerce and, with this object in view, they should be permitted to undertake consulting practice or commissions, subject to approved conditions designed to prevent such private work interfering with the efficient discharge of their duties as teachers.

(16) There should be an adequate system of scholarships and maintenance allowances designed to ensure that no one having the necessary aptitude and ability should be prevented by lack of means from pursuing a course in technical institutions. Hostels should be provided wherever necessary.

(17) Technical institutions should be located in or near industrial and commercial areas, but students from other areas should have an equal opportunity of admission to those institutions. To ensure this it is necessary that technical education should be organised on an all-India basis.

(18) Technical High Schools and Junior Technical, Trade or Industrial Schools should be administered by Provincial Governments but all technical education beyond this stage other than that given in the technological departments of Universities should be placed under a central controlling body which would have on it representatives of all the interests concerned. This body should be set up as soon as possible.

(19) The formation of the A.P.T.I. (I), is a most welcome step in the direction of co-ordinating technical instruction in the country. It should be given adequate representation on the central controlling body.

(20) It is essential that subject to the recommendation in (18) above the administration of all technical education should be under the Education Department of the Central or Provincial Government or State, as the case may be. There should be a separate inspectorial staff for this purpose. The Education Department should maintain close contact with the other Departments concerned with Industry and Commerce.

(21) As a corollary to technical education in its higher stages being administered by a central body, the financial responsibility will have to be accepted by the Central Government.

17. Summary of the main conclusions in this chapter:—

(*a*) In view of the prospective needs of post-war industry and commerce for skilled technicians, and in order to cater for the aptitudes of those who will derive greater benefit from a practical course, the establishment of an efficient system of Technical Education at all stages, on the lines set out in the report of the Technical Education Committee, is a matter of great urgency.

(*b*) Due regard should be had to the recommendations of the Abbott-Wood Report in respect of the scope and content of Technical instruction.

(*c*) The estimated gross annual cost of the proposals contained in this chapter will be approximately Rs. 10 crores and the net cost Rs. 8 crores.

CHAPTER VI.—ADULT EDUCATION

1. In a country with a population of which over 85 per cent. is illiterate, the cause of Adult Education needs no special pleading. That the public has become to some extent sensible of the position has been made evident by the enthusiasm evoked by recent literacy campaigns. Developments in Adult Education, confined as a rule mainly to the elimination of illiteracy, formed a prominent feature of the educational programmes of some of the popular Governments. In December 1938 the Board appointed a special committee to consider the question of adult education. The main conclusions and recommendations of the Committee, together with the Board's decisions thereon, are given at the end of this chapter, and it is on those conclusions and recommendations that the argument of this chapter is mainly based. For the sake of brevity this committee is referred to later simply as the Adult Education Committee.

2. Adult Education has sometimes been described as a compensatory measure in the sense that it is an attempt to give adults a belated opportunity to make up for the opportunities which were denied to them in their youth. But its proper function is a broader and deeper one. It should aim at giving effect to the democratic principle of continuous, lifelong and complete education for all according to their ability to profit by it. In other words, the role of adult education is to make every possible member of a State an effective and efficient citizen and thus to give reality to the ideal of democracy. Adult education in this sense is still far from realization even in those countries where it has made the greatest progress, but the full objective continues to gain increasing recognition. In India so far the general attitude has been to regard adult education as connoting adult literacy. The reason is obvious, for the problem in this country is vastly different from what it is in Western countries. A child must learn to walk before he can run; an adult must be literate before he can hope to derive any benefit from facilities for education in the wider sense. For this reason the Adult Education Committee recognised that the main emphasis in this country must for some time to come be on literacy, although from the very beginning some provision must be made for adult education proper, so that those made literate may have an inducement as well as an opportunity to pursue their studies.

3. Quite apart from its intrinsic value, adult education is also needed as a powerful auxiliary to primary education in accelerating the process of making the country literate. It is true that the only permanent solution of the problem of illiteracy is universal primary education. Nevertheless, whether or not "the existence of a large number of illiterate parents, who attach no value to literacy in others, including their own children, will", as the Adult Education Committee remarks, "undoubtedly prove one of the greatest obstacles to the introduction of a compulsory system of primary education", there can be no doubt that literate parents will be likely to make the progress of primary education more rapid as well as more effective. But, as pointed out above, if parents are to fill this role properly, they must be provided with facilities not only for a bare acquaintance with the three R's but also for further and continuous instruction according to their capacities, so that they may come to appreciate the value of education and what it really means.

4. It is also important that the further education to be provided for adults should be of such a nature as will not only make them more useful members of society but will also help them in some measure to improve their economic position. Only in this way will the average illiterate acquire respect for education and consequently a desire for the education of his children. Adult education must, therefore, be practical as well as cultural: it should also be closely related to the student's daily life and work. It is

true that in Western countries the tendency has been to keep adult education separate from technical, commercial and art education, but even there technical and other vocational institutions have of late been giving cultural education an increasingly important place in their schemes of instruction. In India, as things are, it is all the more necessary to secure a close association of cultural and technical education and the Adult Education Committee "welcome on general grounds this tendency to co-ordinate all forms of adult instruction and believe that it is neither necessary nor expedient in India, and above all in the Indian village, to define too strictly the sphere of adult education." It is therefore contemplated that adult education centres will not merely provide for the teaching of the more academic subjects but will also have vocational classes for those who may not, at least to begin with, be attracted by the cultural side of adult instruction and may wish to learn some craft.

5. To return for the moment to the problem of literacy, it may be asked what precisely is the standard to be aimed at. Is it ability merely to sign one's name and to read print with or without effort? Is it a rudimentary acquaintance with the three R's? Or is it something more? Literacy is a means and not an end in itself. The end is that whole education of the individual's personality which will develop to the highest degree his physical, intellectual and moral faculties, raise him to the full stature of a man and transform him into a conscious and useful member of society. Mere literacy does promote this end in the sense that it is an essential first step towards it, but it is only a first step. The literate who is literate and no more stands merely at the threshold of that full development of personality which all should seek to attain. This postulates a standard of literacy which is undoubtedly high but not higher than is necessary, if literacy is to be permanent value both to the individual and to the community to which he belongs. Judged by this standard it must be admitted that the achievements of mass literacy campaigns both in this and other countries, in spite of the enthusiasm they evoked, must to a large extent be regarded as a waste of human effort. Urgent, therefore. as the need is to eliminate illiteracy as quickly and economically as possible, the supreme consideration must be that the work should be lasting.

If, therefore, the object is to make adults not merely literate but permanently literate and at the same time sufficiently literate to be capable as well as desirous of benefiting from further education, the literacy course must be a thorough one. Even in the case of a naturally intelligent student such a course cannot be expected to produce tangible results in less than a hundred hours, for to the teaching of the three R's must be added some elementary instruction related to the student's vocation in life as well as some general knowledge of the rudiments of civics, economics, history, geography and hygiene. It should cover not less than a full year, as it will not be reasonable to expect grown-up students to attend classes more than four times a week and their occupations in many cases will not allow them to attend during more than six months in the year.

6. It is not easy to fix an age range for adult education; such age limits as have been fixed in the various provinces in this country as well as in other countries vary considerably. For instance, the age range is 10—40 in Bengal (as recommended by the Bengal Committee on Adult Education, 1938), 15—40 in Bihar, 14—50 in Bombay (as recommended by the Bombay Adult Education Committee, 1938) and 16—50 in China, while the Central Advisory Board of Education felt that boys under the age of twelve should not be admitted to an adult centre. In determining what age limits, if any, are desirable the following points may be taken into consideration:—

(*a*) It is wasteful to admit into a primary school a boy or a girl who cannot stay there for at least four years. This would necessarily mean that some alternative arrangements must be made for those above the age of ten when compulsory education is introduced.

(*b*) In view of the normal expectation of life in this country and the mental development of illiterates, particularly in the villages, no useful purpose would as a rule be served by trying to educate persons over forty years of age.

These considerations suggest that the normal age range of adult education should be 10 *plus* to 40.

It should, however, be emphasised, as recommended by the Adult Education Committee, that as far as possible, separate classes should be organised, preferably during the day time, for boys between ten and sixteen years, as it is undesirable from many points of view to mix boys and men in adult classes. It would also be preferable to have separate classes for young girls, but the object to of mixing young girls and women is not so serious as in the case of boys and men and may be easily out-weighed by the factor of resources available and other practical considerations.

7. Although, as has been said above, the last few years have witnessed a fairly wide public awakening in regard to adult literacy, the position on the whole cannot be described as anything but extremely unsatisfactory. Even if the rather generous provisional census estimates* are accepted and literacy is taken to mean no more than ability to read and write, the percentage of literacy above the age of five is found to be only 14·6 per cent. The total population of British India within the age range 10—40 in June 1940, according to the Annual Report of the Public Health Commissioner with the Government of India for that year, was estimated to be 14,86,45,389† Out of these 14·6 per cent., i.e., 2,17,02,227 are considered to be literate. The number of adults to be made literate is therefore 12,69,43,162 or, in round figures, 12,70,00,000. The last decade saw the biggest jump in literacy figures, from 8·3 per cent. to 14·6 per cent. If this rate of progress is maintained and no other help is given, it will take nearly 140 years to reach the 100 per cent. figure. Even when universal primary education has become the rule, unless special measures are taken, illiteracy will only be eliminated after all the illiterates then over ten years' age are dead. In view of the urgent importance of adult education, not only in the interest of the present illiterates but also as an essential adjunct to any system of compulsory education, the problem of liquidating illiteracy and establishing effective arrangements for adult education must be tackled as quickly as possible. What can be done, however, is necessarily limited by the resources available. Even if all the money required were immediately forthcoming, it would still be necessary to find suitable teachers and organisers, of whom there are comparatively few available at present. Once, however, a comprehensive system of national education has been inaugurated, it might be feasible to complete the work of adult literacy within twenty-five years, even after taking into account the fact that the first five years will have to be devoted mainly to preparatory work, including the setting up of an effective organisation for the training of teachers and that as literacy progresses, there must be a gradual shift over to the work of adult education proper.

In theory, therefore, the problem is to make literate within twenty-five years 12,70,00,000 persons and within the same period to organise a system of adult education which will be a permanent part of the general educational system and will be in full operation from the twenty-sixth year onwards. In actual practice, however, the number of persons to be made literate will be smaller than estimated above, for a fairly large number of older persons will inevitably pass out of the 10—40 age range before it is possible to provide for them and others will die. On a rough calculation the anticipated decrease from these causes comes to about 3,65,00,000. This leaves 9,05,00,000 persons to be made literate.

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* The 1941 Census authorities have not published any literacy figures but they prepared certain provisional estimates and in the absence of more authoritative figures they have been used in this chapter.

† Exclusive of Baluchistan for which not even approximate figures are available.

8. In planning a detailed programme to give effect to the object stated above the first question to be considered is that of securing an adequate supply of teachers. There are three possible sources, professional teachers engaged in day schools, non-professional teachers who have received special training for adult education work and volunteers. For the purposes of this scheme it is not proposed to take into account volunteer-teachers as it is quite impossible to assess even their approximate numbers. Those that are forthcoming may be used for the work of adult education proper, for which no separate teaching staff is being provided, or they may be utilised for literacy work thus releasing a corresponding number of the other teachers for further education.

At present there are in all 5,18,018* teachers in Primary, Middle and High Schools. Out of these not more than about 1,50,000 can be expected to be available for adult education; the rest may be either unsuitable or unwilling to take up the work. The number of non-professional teachers is not likely to be very large, if there is to be a careful selection and those selected are also required to undergo training. It is impossible to estimate the possible number with any degree of exactness, but probably it is never at any time likely to be more than fifty thousand. Even this number will have to be built up in stages, and during the first working year, *i.e.*, the sixth year of the programme, it will not be wise to count on more than 20,000, especially as they will first have to be trained. In the second year the number may rise to 23,000, in the third to 26,000 and so on until there are 50,000 such teachers in the sixteenth year.

It may be assumed that there will be in all 1,80,000 teachers to begin with in the sixth year. This number is made up of 1,50,000 out of the present number of school teachers, 20,000 non-professional teachers and 10,000 out of the additional teachers just leaving the training schools, who will be available in the sixth year.* Of these new teachers only 50 per cent. are taken as likely to be available. They will all have received some training in adult education as part of their normal course, but it would be over-optimistic to rely upon more than half of them taking up adult education work. The total number of teachers available for adult education work will thus increase every year by 13,000 through the addition of new school teachers and non-professional teachers, as shown in the statement in Appendix—Table E till the maximum number of 2,58,000 is reached in the twelfth year. It is not proposed to increase this number in subsequent years, as it should suffice for all ordinary purposes and will in fact be likely to be in excess of requirements once illiteracy is liquidated.

9. It cannot be too strongly emphasised that Adult Education, even in its simplest form, is not an easy business; it demands a special and exacting technique. Enthusiasm and good intentions alone cannot make a good teacher, nor can the success of a teacher in a children's school be a guarantee of his fitness to teach adults. It is still more necessary than in the case of children that, in the words of the Adult Education Committee, "the teacher's manner should be stimulating and his matter interesting." A high degree of tact, understanding and ability to inspire and lead is required of the teacher, for he has to deal not with a child, who is mentally raw and receptive and who has compulsorily to attend school, but with a grown-up person who requires more stimulating and interesting instruction and who is likely to leave the class the moment he finds the lessons not worth while. It is, therefore, necessary to keep alive the interest of the students, to make the instruction practical and to relate it to their own activities and environments. Lastly, the personal factor is still more imporant in an adult school than in a school for children. The teacher is not a superior being on a pedestal but only another man or woman who happens to possess greater knowledge in certain matters. Relations between the teacher and his adult students must therefore be both close and cordial. It was with these con-

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* *Vide* Chapter VII.

siderations in mind that the Adult Education Committee recommended that in addition to inspectors and organisers, who should themselves be experts in adult education, a nucleus of specially trained teachers should be appointed, who will not only teach but will also assist in selecting, training and supervising other teachers.

With the same object of stimulating the interest of the adult student and investing instruction with an atmosphere of the practical and real, it is necessary to make the fullest possible use of visual and mechanical aids such as pictures, illustrations, artistic and other objects, the magic lantern, the cinema, the gramophone, the radio, etc. Dancing, particularly folk dancing, music, both vocal and instrumental, and drama will also be useful, not only as pleasant accomplishments in themselves as well as recreative activities but also as helping to attract and stimulating adult students.

10. It will seldom be necessary to provide separate buildings for adult education centres, though it is obviously essential that each centre should have a definite home of its own, even though classes may often be held out of doors. There should be no difficulty in obtaining the use of schools or other suitable premises in towns while in villages the Basic (Primary or Middle) School will offer an obvious solution. With the progress of universal education, plenty of accommodation will became available everywhere, but in the meantime, until suitable school buildings can be provided, accommodation for adult education centres may also be obtained in Local Board buildings, Health Centres, Rural Development Centres or hired buildings. Rural Development Centres are likely to be perhaps the most suitable in those provinces where the work of rural development has made good progress.

Perhaps the most important function of a literacy campaign is to provide numerous and adequate libraries, for a literate cannot remain literate, much less progress, unless he can have convenient access to suitable and interesting reading material. The Adult Education Committee, therefore, strongly urged that "every adult school should have a library of its own or be able to obtain free books of the right kind from a neighbouring library." Obviously a very large library sytsem will be necessary in a country like India, but with a properly organised scheme of circulating libraries and exchange of books the cost need not be prohibitive. The libraries, together with instructional equipmet etc., should be housed in the premises used as adult education centres

11. The problem of adult education is so vast and public interest in it has of late been so markedly on the increase that it is natural to look for help to voluntary effort. A great deal has already been accomplished by public spirited individuals and organisations, and there is no doubt that their contribution under a national system of education will be even more considerable. Given the right type of organisation, there is a great deal of public energy which can be harnessed to useful work in many branches of social service. The problem of adult education as a whole, however, is far too vast to be within the capacity of unaided voluntary effort, whatever its organisation, however effective its propaganda and howsoever willing and generous the public which supports it. The state must accept the primary responsibility for tackling the problem.

There are specific ways in which the help of the public-spirited can be enlisted. For instance, the great employers of labour, big commercial firms and other trade associations as well as the bigger landlords can, and some of them no doubt will, offer assistance in this work in many ways. Such help can perhaps more confidently be expected from the employers of labour and industrial organisations in view of the need for educated manual workers which various authoritative bodies have repeatedly stressed. The Royal Commission on Labour in 1930 called pointed attention to the disastrous effect of the whole mass of industrial labour being illiterate, a state of affairs unknown in any other country of industrial importance. The same view was expressed again ten years later by the Bihar Labour Enquiry Committee and the Bombay Textile Labour Enquiry Committee. There will also be some social service organisations and public spirited individuals who will desire to work on their own. The state should welcome the voluntary services of such organisations and individuals and afford all possible aid, provided they are prepared to conform to the general principles of the national scheme and the standard of their instructional work does not fall short of the state standard. It is not, however, proposed to take into account, for purposes of estimating either the cost of the scheme or the time required, such voluntary assistance or service, as it is not possible to calculate even approximately what it might amount to.

12. It is clear that the task of providing adequate facilities for adult education is not only big but also extremely difficult. It is more particularly so in regard to women. In addition to their own peculiar difficulties due to social customs, the obstacles which deter men from pursuing their education, for instance mental lethargy, ignorant distrust of modern ways and lack of leisure, are more formidable in the case of women. Moreover, even if all the other conditions were reasonably favourable, an almost insuperable obstacle would still remain on account of the lack of women teachers. It is a vicious circle which will only be effectively broken when a national system of education is producing its full quota of educated women. Meanwhile the importance of making women, and particularly mothers, literate is so great for the future generations that what can be done must be done. Obviously the standard of literacy among women should not in any case be lower than among men. But until women teachers are available in sufficient numbers and where social customs do not permit mixed classes, it may be necessary to depend to a large extent on volunteer teachers, even if their training and qualifications fall short of what would normally be required.

The Adult Education Committee paid special attention to this question and approved of various suggestions, *e.g.*, that girl pupils of colleges and High Schools should be encouraged to undertake social welfare, including educational, work, that educated mistresses should consider it a moral obligation to make their servants as well as their children literate, that school children should be urged to carry literacy into their families, that widows should be induced to take up literacy work and so on.

13. It now remains to plan the actual literacy programme for the twenty-five years in which the campaign is to be completed. The distribution of population, the necessity of having in many areas separate classes for women and girls, the desirability of separate arrangements for young boys, the need for keeping the number of students in a class within efficient limits and other factors suggest that the average enrolment per class should not be fixed at more than 25.

As already indicated, the full working of the scheme cannot be started immediately. The first five years must be devoted to planning, to the recruitment and training of teachers and to the general setting up of necessary organisation. During this period some literacy work will no doubt continue to be done in the way that it is being done at the moment. The national system of adult education will not, however, come into operation till the sixth year during which it is proposed to make 45,00,000 adults literate. Therafter, as additional teachers become available, this number will increase by 3,25,000 every year till the figure of 61,25,000 is reached in the eleventh year. For the next six years, the peak years, the number will be raised by another 3,25,000 to 64,50,000, so that at the end of the seventeenth year there should be 7,05,75,000 literates, leaving less than 2,00,00,000 for the next eight years. To avoid any sudden changes, qualitative or quantitative, in the literacy organisation it is suggested that the annual output of literacy should now begin to diminish steadily until by the twenty-fifth year there should be very little literacy work left to attend to. The literacy organisation will thus slowly and smoothly transform itself into a permanent machinery for adult education.

In the early years there will be comparatively little adult education in the proper sense of the term. But as soon as people begin to achieve literacy, some demand for adult education ought to arise and it is necessary to make some provision for it from the very beginning. This demand may be expected to grow in proportion to the increase in literacy. It is not, however, intended, nor would it be desirable, to have a separate organisation for adult education. It is, therefore, suggested that there should be only one organisation which will in the early years concentrate on literacy work and later on devote itself wholly to adult education in the fuller sense. To put it in another way, the adult education work proper should be telescoped into the literacy work at first gradually and then at an accelerated pace until by the twenty-fifth year the former will have almost replaced the latter and will be ready to take its place completely in the twenty-sixth year.

14. The number of adults to be made literate has been taken as 9,05,00,000 and it has been explained above that on an average every 25 students will require one teacher. There will thus be required in all 36,20,000 teachers. The average fee per teacher may be taken at Re. 1 per hour or Rs. 100 per annum for a hundred hour course. The total salary bill thus comes to Rs. 36,20,00,000. To this amount 15 per cent. should be added to cover extra expenditure on equipment, administration, etc. The total expenditure on the twenty-five year literacy programme thus comes to Rs. 41,63,00,000. For the work of adult educaton proper, in view of what has been said above, expenditure may be calculated at 10 per cent. of the expenditure on literacy work up to the end of the seventeenth year and thereafter at Rs. 3,00,00,000 less what is required for literacy work. The total expenditure on adult education work during the twenty-five years will thus come to Rs. 18,08,09,500.

The total expenditure on adult education, including literacy, will therefore be Rs. 59,71,09,500 over a twenty-five year period. During the first operational year, the sixth year of the scheme, the expenditure will be Rs. 2,27,70,000, and it will increase every year by Rs. 16,44,500 till it is Rs. 3,26,37,000 from the twelfth to the seventeenth year. From the eighteenth year it will be stabilised at the permanent figure of Rs.3,00,00,000 per annum.

If illiteracy is to be extinguished on a voluntary basis it will not be practicable to charge fees. A reasonable fee may be charged for adult education classes of a more advanced type. The possible income from this source cannot be calculated and in any case will be comparatively small.

Total expenditure on adult education over twenty-five years.

	Rs.
Salary of literacy teachers @ Re. 1 per hour for 100 hours	36,20,00,000
15 per cent. of above for equipment, administration etc.	5,43,00,000
Total	41,63,00,000
Expenditure on adult education	18,08,09,500
	59,71,09,500
Average annual expenditure (excluding preparatory period)	3,00,00,000

15. The Board wish that it were possible to eliminate illiteracy in less than twenty-five years but they have come to the conclusion that if the work is to be done properly, the problem of teachers alone makes it impracticable a shorter period.

16. The main conclusions and recommendations of the Adult Education Committee of the Central Advisory Board of Education, together with the decisions of the Board thereon, are reproduced below:—

NOTE :—All the conclusions and recommendations were adopted by the Board, subject to the notes given below.

(1) To secure an early and effective solution of India's educational problems, the provision of facilities for adult education on the widest scale and the introduction of a free and compulsory system of primary education are of equal urgency and must be treated as complementary to one another.

(2) While the literacy campaign is only one aspect of the adult education movement, the prevalence of illiteracy in India at the present time makes it the aspect to which immediate attention must be devoted.

(3) Literacy is a means to further education and must not be regarded as an end in itself. The primary aim of the campaign must be not merely to make adults literate but to keep them literate. To achieve its object the attack must be launched on the widest possible front with the help of every agency, human or material, which can in any way contribute to its success. Continuous and effective propaganda of all kinds is essential.

(4) Efforts should be directed in the beginning to persuade illiterates voluntarily to undergo instruction. If a voluntary system fails to achieve its object, ways and means of bringing pressure to bear on illiterates should be explored.

(5) In a movement of this character the utmost freedom must be allowed to experiment and regard must be had at all times to local conditions. No useful purpose would be served by attempting to prescribe methods or draw up a code applicable to India as a whole. Valuable assistance might, however, be afforded to Provincial Governments and other authorities responsible for adult education if a committee of experts were appointed to report on questions of teaching technique and survey the results of experiments.

(Board's decision: "The Board were of opinion that it would be premature at this stage to appoint a Committee as suggested. It is too clearly as yet to survey the progress of the movement as a whole or to assess the results of the experiments which are being carried out in many areas. The Educational Commissioner was asked to collect information from Provincial Education Authorities as and when available and to prepare a statement for the Board").

(6) Whatever subjects are introduced into the curriculum and whatever the teaching methods adopted, the form in which instruction is given must be intelligible and interesting to the student and the instruction itself should be closely related to his occupation, his personal interests and the social and economic conditions under which he lives.

(7) It is unnecessary and inexpedient in view of the circumstances prevailing in India to draw any rigid distinction between adult education in the strict sense and technical, commercial or art instruction or to regard the latter as falling outside the sphere of the former. The easiest way of aproach to many adult students may be through subjects of a vocational character.

(8) With a view to defining what is meant by an adult it is recommended:—

(*a*) that a boy under the age of twelve should not be admitted to an adult centre under any circumstances;

(*b*) that a boy, so long as he is attending a full-time day school, should not be encouraged to attend evening classes as well; and

(*c*) that subject to (*b*) above and wherever the numbers justify it, separate classes should be organized for boys between twelve and sixteen.

It is unnecessary to fix any age limits in the case of girls who wish to join adult classes for women.

(9) Every effort should be made to enlist the help of voluntary agencies. Classes run by reputable associations should receive every encouragement and bodies whose primary objects are not educational need not be excluded if adequate safeguards are provided against any risk of the movement being used for religious or political propaganda.

(10) Universities should be urged to expand and popularize the work of their extra-mural departments and provide opportunities for adult students of exceptional ability to take a University course.

(Board's decision on Nos. 10, 12 and 13: "The Board decided, without endorsing them, to ask Provincial Governments to bring them to the notice of Universities in their areas for such action as they might think fit").

(11) An extension in the number and scope of institutions providing technical, commercial and art instruction is urgently needed, and subjects of a cultural or recreational kind should be included in their curricula.

(12) Adult education is a branch of social reconstruction. Social science in a practical form should be taught in all Universities.

(13) The possibility of making a period of social service obligatory on all students in Universities and pupils in the upper forms of High Schools should be carefully examined. Pending the setting up of a special committee for this purpose a strong appeal should be made to all educated persons, and in particular to Government servants, to render voluntary service in connection with the literacy campaign.

(14) Mechanical aids to learning such as the ratio, the cinema, the gramophone and the magic lantern can be used with geat effect in adult education. To enable them to be employed much more widely than at present steps should be taken to increase the supply and reduce the cost. Information on this and other points should be collected and distributed by the Bureau of the Central Advisory Board of Education.

(15) An adequate supply of trained and competent teachers is the fundamental need in adult as in every other branch of education. Teachers in day schools may be expected to form the nucleus of this supply but in view of the fact that teaching methods which are successful with children are not always suitable for adults, they will require a special course of training. It is recommended that the course of training in the normal schools should include instruction in the technique of teaching adults.

(16) It will be necessary to supplement the professional teachers by a large body of helpers drawn from other occupations. The training of these is an essential preliminary to their employment, particularly if they are to be in charge of classes.

(17) Every Province should appoint Inspectors and Organizers, expert in and able to devote their whole time to adult education. The appointment by at least one Province of a number of full-time teachers for adult work only is a commendable experiment.

(18) The movement so far has depended very largely on unpaid service but it is reasonable to anticipate that it will soon require a very considerable portion of paid workers, especially when the demand arises for instruction beyond the stage of mere literacy. The financial implications of this, including the rates of pay and conditions of service to be offered, are matters for local consideration.

(19) A library is an essential adjunct to every adult education centre. Liberal grants should be given to increase the number and size of libraries, particularly in rural areas, and to assist the production of suitable literature. The Central Government should help in the distribution of books and other literature by granting special postal concessions. Provincial Governments should take immediately steps to deal with the present unsatisfactory state of affairs so far as the supply of text-books is concerned.

(Board's decision: "While in full agreement as to the need for extending libraries and providing suitable literature, the Board felt that no useful purpose would be served by asking the Central Government for special postal concessions as suggested by the Committee").

(20) The importance of a wide expansion of facilities for adult education is even more important in the case of women than that of men. The methods of approach in the case of women must be at once more varied and

less formal. A number of suggestions for furthering the movement among women will be found in Section IX.*

(21) Illiteracy is not confined to the village: a large proportion of the workers in urban areas is also illiterate. In this connection it is essential to secure the co-operation of employers of labour and associations of workers. The question of levying a tax on those employers of labour who do not make adequate provision for the education of their employees is worthy of consideration.

(Board's decision: "The Board felt that practical difficulties would arise with regard to the levying of a tax on those employers who do not make provision for the education of their employees").

(22) It should be obligatory on all Government departments, central and local, to ensure that their staffs are literate.

(Board's decision: "While agreeing as to the desirability of all Government departments giving every encouragement to their staffs to become literate, the Board did not agree that this should be made obligatory under existing circumstances").

(23) The progress of the Adult Education Movement canonly be ensured if its control in each Province is vested in a single authority. That authority should be the Education Department. It should be the duty of the Education Department (*a*) to establish satisfactory contacts with other authorities in the province concerned with social reconstruction, of which adult education is a part and (*b*) to delegate authority to such subordinate bodies and to appoint such officers as local circumstances may require for the effective organization and supervision of the movement.

(24) The cost of the literacy campaign alone apart from other essential developments in adult education will impose a very severe strain on the resources of most Provincial Governments. In view of the extreme importance of bringing the campaign to a successful conclusion at the earliest possible date, the Central Government should afford financial assistance to those Provincial Governments which are prepared to carry out approved schemes within the next five years.

(Board's decision: "In view of the prior claims of primary education to any financial assistance which might be forthcoming from the Central Government towards educational edvelopment in the Provinces, the Board were unable to accept the recommendation of the Committee that the Central Government should make a specific grant to Provincial Governments for carrying out approved schemes of adult education").

(25) In each Province there should be established a Bureau to collect and distribute information with regard to the adult education movement. There should also be a Central Bureau to collect, collate and publish at regular intervals information as to the progress of the movement in all parts of the country. The Bureau of the Central Advisory Board of Education should be equipped to undertake this latter function.

(Board's decision: "The Board were in sympathy with the general policy outlined but thought it advisable to wait for action by Provincial Governments before expanding their own Bureau for this purpose").

(26) The returns as to literacy in the Census Report should be so amended as to make them more useful for educational purposes.

17. Summary of the main conclusions in this chapter:—

(*a*) Comprehensive arrangements on the general lines set out in the Adult Education Commitee's report should form an integral part of any national system of education. These are particularly important in India today in view of the very high percentage of illiterates.

(*b*) Literacy is a means not an end in itself. Although the main emphasis in the beginning may be placed on the liquidation of illiteracy, adult education in the full sense must be provided for those already literate.

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* Report of the Committee.

The amount of this should progressively increase as illiteracy disappears.

(*c*) *It is estimated that even with the introduction of a universal system of Basic education there will be over 9 crores of illiterates (age 10—40) to be dealt with. Plans should be made to solve this problem by a campaign spread over twenty years. Before this campaign opens, five years should be devoted to the necessary preparations, including the recruitment and training of the staff of teachers required.

(*d*) In this as in all branches of education the quality of the teacher is of supreme importance. The difficulty of obtaining a sufficient number of teachers of the right type, particularly women, must on no account be under-estimated.

(*e*) The responsibility for adult education must rest with the State but every effort should be made to enlist the aid of suitable voluntary organisations wherever available.

(*f*) The estimated total annual cost of the proposals contained in this chapter is Rs. 3 crores. At the height of the literacy campaign this may be exceeded by Rs. 25—30 lakhs, but the average annual cost for the twenty years will be a little less than Rs. 3 crores.

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* The table showing the progress of Adult Education Programme is given in Appendix—Table E.

CHAPTER VII.—THE TRAINING OF TEACHERS

1. The fundamental requirement of any comprehensive development in the educational system is the provision of an adequate establishment of teachers and of the necessary institutions for training them. The latter ought not only to provide the requisite professional training, but should also inculcate a way of life which will attract and make its mark upon the young man or woman who intends to be a teacher. Teaching must be adequately remunerated but the fact that it should be a vocation as well as a profession should be impressed on intending teachers at all stages of their training.

2. The institutions in India for the training of teachers in 1940-41 of these institutions 612 were training schools which admitted class IV. Out of these institutions 612 were training schools which admitted class IV pass and Middle pass candidates for training as teachers of primary and lower secondary classes. These schools generally give one or two years' training of a rather elementary nature and the successful candidates are awarded the Vernacular Teachers' Certificate or the Junior Vernacular Teachers' Certificate. The salaries in training schools vary greatly; the Head may be in the provicial scale, while the lowest paid member on the stac may receive as Rs. 30 per month.

During 1940-41 the Training Colleges for training graduates numbered 28 and in that year they trained 1,413 teachers. These institutions as a rule are affiliated to Universities but are usually situated as separate units, so that their trainees are almost completely divorced from University life. In some cases they provide facilities for the training of Matriculate and Intermediate candidates as well as Graduates. There is a separate type of institution also called a Training College, which exists specially for the training of non-graduate teachers (Matriculate and Intermediate). The actual number of these institutions is not known but the number of students trained by them as well as those trained by University Training Colleges was 2,096 (1940-41). The duration of the period of training is one year in some cases and two years in others, and the Teachers' Certificate is awarded to successful candidates. The duration of the course at the Training Colleges for graduates is one year but some of them also provide facilities for research which lead to the degrees of Bachelor in Education (B. Ed.) or Master in Education (M. Ed.). The one year course entitles the candidates to a B. T., L. T., D. T., or S. A. V. Certificate, according to the University to which the College is affiliated. These differences in nomenclature tend to make each institution regard its own particular qualifications as superior to those of any other, although in actual practice the syllabuses, periods of instruction, qualifications of the staff, etc., are much the same. The resulting effect of these variations is not in the interest of the teaching profession as a whole. As in the case of Training Schools, the salaries in the Training Colleges vary considerably. The highest paid member may be in the old I.E.S. or in the Class I scale, whereas the lowest paid may get only Rs. 75 per mensem.

There are also a number of Indian teachers who take their professional training abroad, but the number of these is not known. The Board regard it as highly desirable that every encouragement should be given to selected teachers to proceed abroad for professional training or research. The practice of granting study leave for this purpose should be widely extended.

From the above statistics it will be obvious that the number of training institutions that exist at present is utterly insufficient for the needs of a country as vast as India. Furthermore, the type of training which these institutions give is often open to serious criticism. It fails to keep pace with modern ideas in education and there is insufficient co-ordination between theory and practice. The curriculum tends to be rigid and the conditions of training rarely afford the student in training or even his teachers an opportunity of ascertaining definitely whether or not he is really fitted for teaching. The result is that many unsuitable candidates, who should ordinarily be 'weeded out', find their way into the teaching profession.

3. The Committee on the Recruitment, Training and Conditions of Service of Teachers, whose report was adopted by the Board in January 1943, have suggested vital changes in the existing state of affairs and its recommendations, when carried into effect, are likely to put the teaching profession on a sounder basis. Detailed reference is invited to this report, which is a document of great importance in relation to educational development. The only point in which the report needs supplementing is with regard to the employment of women teachers. In this connection it may be suggested that married women and widows should be increasingly employed in the profession, since it is now being realised that marriage and motherhood provide a background of knowledge and experience which is of inestimable value to women entrusted with the care and training of the young.

4. In the existing schools, primary and secondary, there are 5,18,018 teachers of whom 2,10,496 are untrained (1940-41). The Board have adopted the principle that all teachers must be trained. The output of the present Training Institutions is about 20,000 per year. If thirty years is taken as the normal period of service, the average wastage in the present number of teachers is 17,267 per year. It is, therefore, obvious that the present number of institutions can do no more than meet the wastage of the existing establishment and possibly provide training for the present teachers who are untrained: they will only be able to do this efficiently when they have been reorganised and brought into line with modern requirements. To provide the vast army of teachers which a national system will require a large number of new training institutions will be needed.

In the proposed expansion scheme for the training of teachers it is intended to train 22,17,733 teachers in the course of thirty-five years. Of these 12,29,533 will be required for the Pre-Primary and Junior Basic (Primary) Schools, 6,25,560 for the Senior Basic (Middle) Schools, 1,81,320 for the junior departments of High Schools and 1,81,320 for the senior departments of High Schools. For reasons given in the chapter on Basic Education it is proposed to treat the existing provision, as a reserve towards meeting the needs of the increase of population which may be expected to take place during the period required for bringing the new system into operation. Consequently the calculations in this chapter assume the need for providing teachers for Basic Education and for High Schools for the whole number of children available in accordance with present figures.

The rate at which trained teachers can be produced is the factor on which the entire development programme will depend. It may be taken for granted that in any scheme of expansion the first few years will be devoted to establishing new training colleges and staffing them with suitable teachers. It is proposed to allow five years for this task. From the sixth year onwards it is expected that a gradual flow of additional teachers will begin to be available. In the early stages the number of teachers produced will depend largely on the number of pupils leaving the existing High Schools and Universities who can be attracted into the teaching profession by improved prospects. Later on the expanded High Schools themselves will begin to turn out a large number of potential teachers and it is to be hoped that better salaries and more attractive conditions of service generally will enable the responsible authorities to obtain the requisite supply of suitable teachers.

From the time when additional training facilities will become available, i.e., about the sixth year of the scheme, until the fifteenth year it has been estimated that there will be a normal intake of 20,000 per year. By the end of the fifteenth year there will thus be 2,00,000 teachers over and above those produced by the training institutions now in existence. Thereafter it is reasonable to look forward to accelerating the output of teachers trained, since the expanded High Schools will begin to turn out matriculates from the thirteenth year onwards and intending teachers will be completing their training two years later. From the sixteenth to the nineteenth year there will be a further increase of 10,000, making the total 30,000 per year. In the twentieth year a still further increase of 30,000 is anticipated, bringing the total up to 60,000 per year. From the twenty-first year onwards, by the process of assimilating still larger numbers in the training institutions the required number for the whole country will be reached by the thirty-ninth year, when 22,00,000 additional teachers will be available. Thus to supply the whole country with the staffs required for the main block of the national system, viz., Basic Schools and High Schools, will take a period of not less than thirty-five years from the day of opening the new Training Centres. The programme outlined above is set out in detail in the Appendix—Table F and is also graphically represented at the end. In this table the wastage and the precise numbers of pupils in the different stages are not shown. Nor is the training of pre-primary school teachers shown separately, because these will number only 33,333 and their training will depend to some extent upon voluntary efforts. Once a national system is fully established the annual wastage among teachers due to retirement or death will be very roughly 90,000. Any surplus of Training College accommodation may then be diverted to other Higher Education purposes.

5. The Central Advisory Board have accepted the recommendation of their Committee already mentioned that the normal periods of training should be as follows: for Pre-Primary teachers two years, for Junior Basic (Primary) two years, for Senior Basic (Middle) three years, for non-graduates in High Schools two years, and for graduates in High Schools one year after graduation. Further, the Pre-Primary or Nursery School teachers will require special attention, which will take account of personal characteristics and aptitudes, while teachers for Senior Basic (Middle) Schools will need special training in crafts. A somewhat different orientation will have to be given to the training of non-graduates for High Schools, as most of them will be called upon to teach academic subjects to selected children. It will, therefore, be necessary to strengthen their educational background during the period of training as well as to instruct them in teaching methods. At least three separate types of training school would seem to be required, *viz.*:—

1. For Pre-Primary School teachers.
2. For Basic (Primary and Middle) teachers.
3. For non-graduate teachers in High Schools.

6. The next question for consideration is what should be the basis of selection for training. In this connection it is suggested that a system similar to that in vogue in some parts of England might be adopted. In this system suitable pupils who wish to become teachers are picked out during the last two years of their High School course. They are kept under observation by Heads and Inspectors and are given the opportunity of visiting other schools and trying their hand at actual teaching. Doubtful cases are sifted by this means. Such pupils often receive special stipends. This system has the advantage, among others, of ensuring that intending teachers before being admitted to Training Colleges are *prima facie* likely to make good.

The course during the first year in the Training College should be devoted to the study of general and professional subjects, supplemented by visits to schools, discussions and other means of stimulating the interest of students. A considerable part of this period should be devoted to teaching practice, which should never be relegated entirely to the second year. Wherever a training college is established, all schools which are easily accessible should be made available for teaching practice. Unless this is done, it will be difficult to train large numbers within a stipulated peroid. Moreover, teaching practice can best be done in ordinary schools since the atmosphere of model schools attached to Training Institutions is usually artificial. The second year course should be of a more intensive nature: students should be encouraged to read more widely and more emphasis should be laid on tutorials. Trainees should also be encouraged to pursue their special aptitudes. At the end of the second year's course students who have shown a special interest in or aptitude for craft work should be selected for a third year's training for service in Senior Basic (Middle) Schools or as craft teachers in High Schools. Every effort should be made to enhance the value of the Teachers Certificate awarded to successful students at the end of the appropriate course.

7. If the training unit is too large, it will raise serious problems in regard to teaching practice. If it is too small, it will be uneconomic to staff and equip. A reasonable unit for a Training college would be an institution with about 300 trainees or an annual entry of 150 for a two year's course.

The scales of salaries offered to staff of a Training college should be somewhat higher than those of graduate teachers in High Schools. On the basis of 1 instructor to 15 trainees there should be 20 instructors per school. Of these, 15 might be on a scale of Rs. 100—5—150 p.m., with 4 occupying speacial posts of responsibility on a scale of Rs. 125—5—175 p.m. In addition there should be an Assistant Principal on a scale of Rs.170—10—250 p.m. and a Principal in the scale of Rs. 250—10—350 p.m. On this basis it will be seen from the table below that the salary bill for an institution of this size will amount to Rs. 41,412 per annum and if as in other schools this may be taken as 70 per cent. of the total expenditure the gross annual cost, excluding maintenance of student, will approximate to Rs. 60,000 or Rs. 200 per student.

Cost per Training **College (300 Students—under graduates)**

Staff required	Scale of pay	Actuarial average	Cost per year	Total cost of salaries	Total cost of Provident Fund	Total cost of salaries and Provident Fund
	Rs.	Rs.	Rs.	Rs.	Rs.	**Rs.**
15 Instructors.	100-5-150 p.m.	136·5	24,570	38,976	2,436	**41,412**
4 ,,	125-5-175 p.m	161·5	7,750			
1 Asst. Principal	170-10-250 p.m.	231·89	2,784			
1 Principal.	250-10-350 p.m.	323·09	3,876			

If an adequate supply of teachers is to be obtained for the salaries proposed it will not be practicable to charge any tuition fee. So far as maintenance is concerned, most Training Institutions will necessarily be residential and under normal conditions Rs.250 per head should cover hostel charges. A fair proportion of the students should be able to make some contribution towards this and it may be assumed that half the total cost may be recovered in this way.

8. The Training College, which is meant exclusively for graduate teachers, should normally provide a year's course, but facilities may also be provided for those students who wish to conduct research or pursue special lines of teaching after the completion of the year's course. The segregation in Universities or Colleges throughout their University course of potential teachers from students training for other professions should be avoided wherever possible. It is not suggested that where special institutions exist for this purpose they should be abolished but when arrangements are being made to satisfy the needs for more trained graduate teachers, Universities should establish Education Departments, in which graduate can enrol and do their professional training while remaining members of their original college or hostel, if geographical and other circumstances permit.

For reasons similar to those mentioned in the case of the Training Colleges for under gradutes the unit for a Training College for graduates should not exceed 200, though the Education Department of a Unitary University might be much larger.

It is contemplated that since the training College will form part of a University, the same figure as for ordinary University students, *i.e.*, Rs 400 per year should be taken as the estimated cost *per capita* (*vide* Chapter IV). The following scales of salaries, which have recently been introduced in the Colleges of Delhi University may be adopted in the case of Training Colleges One-third of the total number of lecturers may be on the senior grade scale.

	Rs.
Junior Lecturer	150—10—250 p. m.
Senior Lecturer	300—20—500 p. m.
Principal	750 p. m.

It will be seen from the table below what the staff would be for a Training College or Education Department units for 200 students at Rs. 400 *per capita* on the usual assumption that staff salaries will equal 70 per cent. of the total expenditure. Since the supervision of teaching practice will bulk largely in a one-year course and make considerable demands on the lecturers' time, the full-time staff will probably need supplementing by occasional lecturers and other specialists. On the basis of the above data the cost per Training College is detailed in the following table:—

Cost per Education Department or Training College (200 students—Graduates)

Staff required	Scale of pay	Actuarial Average	Cost per year	Total cost of salaries	Total cost of Provident Fund	Total cost of Salaries and Provident Fund
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
8 Junior Lecturers	150—10—250 p.m.	223·05	21,408	51,816	3,239	55,055
4 Senior Lecturers	300—20—500 p.m.	446·1	21,408			
1 Principal.	750 p. m.	750	9,000			

For the same reason as in the case of Training Colleges for under-graduates it is not proposed that any fees should be charged to students in Training Colleges or Education Departments for graduates. No provision, however, is made for any special assistance in regard to maintenance since these students, where needy, will be eligible for aid on the same terms as other University students (*vide* Chapter IV).

Another difficulty which has to be met is that in the Board's opinion the Pre-Primary Schools should be exclusively staffed with women teachers. In Junior Basic Schools, at least three-fifths of the teachers should ultimately be women and this will remain true whether they are organised as mixed or single-sex schools. Women teachers will also be required for the Senior Basic (Middle) and High Schools for girls. Ideally, therefore, the teaching establishment should contain considerably more women than men but to begin with there will be a very serious dearth of women teachers. It is hoped that in subsequent years, as the number of girl matriculates increases, women will be recruited in large numbers and take the place of men as teachers of the younger children, whether boys or girls.

9. With regard to the training of teachers for Technical Institutions (other than Technical High Schools) and Special Schools for handicapped children, no detailed scheme can be outlined at present, because it is impossible to forecast how many of such teachers will be required. Technical and Commercial teachers as a rule will get their practical experience in industry and their pedagogical training in the Technical Institutions themselves (vide Chapter V). No special Training Colleges will be required in their case.

10. In addition to the above provisions for the actual training of teachers, refresher courses in accordance with the recommendations of the Board should be provided at frequent intervals in order to keep trained teachers up-to-date. Such courses should cover all subjects of the curriculum as well as new ideas and methods of general interest. They are of the greatest

importance in a country where a large number of teachers necessarily serve in isolated villages.

The Board also wish to emphasise the importance of providing ample facilities for research. The need will be apparent for ensuring particularly during a period of rapid expansion not only that teaching methods are kept up-to-date but also that their suitability to Indian requirements is continuously under review.

11. Summary of the main conclusions in this Chapter:—

(*a*) The proposals for the recruitment and training of teachers as set out in the Report approved by the Central Advisory Board in January 1943 should be generally adopted.

(*b*) The existing training institutions are barely sufficient to meet wastage among existing teachers and to train those hitherto untrained.

(*c*) New Training Colleges (including University Education Departments) must be provided to supply the additional teachers whom a national system will require. These will amount to over 20,00,000 non-graduates for schools of all types and 1,80,000 graduates for High Schools.

(*d*) Arrangements should be made to pick out suitable boys and girls towards the end of the High School course. This is particularly important in Girls' High Schools in view of the vast increase in the number of women teachers required.

(*e*) The courses provided should be essentially practical and should be specially related to the needs of the schools in which the trainees will subsequently serve.

(*f*) No fees should be charged in Training Colleges: liberal assistance should be available for the maintenance of poor students.

(*g*) Refresher courses are of the utmost importance and should be provided for all types of teachers but particularly for those in remote rural areas. Facilities should be provided for research and selected teachers should be encouraged to study educational methods in foreign countries.

(*h*) It is impossible to calculate the precise annual cost of the proposals contained in this chapter. The total net cost of training the additional teachers required for a national system will amount, including maintenance where necessary, to Rs. 1,59,94,98,250 over a period of thirty-five years or an average of Rs. 4,56,99,950 a year (*cf.* Appendix—Table G).

CHAPTER VIII—THE HEALTH OF THE SCHOOL CHILD

(School Medical Service and Physical Education)

1. The proposals in this chapter are based mainly on the findings of the Joint Committee appointed in 1941 by the Central Advisory Boards of Education and Health to report on the Medical Inspection of School Children and the Teaching of Hygiene in Schools. This report, which deals comprehensively with the subject of physical welfare in schools, is a document of great importance and deserves close study by all bodies and persons concerned with education. For convenience a summary of its main conclusions and recommendations is included at the end of this chapter.

2. The importance of safeguarding the health of the future generation by promoting physical fitness in schools has, in recent years, been accepted by all civilised communities. It is generally recognised that only those children who are in sound health can be expected to take full advantage of the educational facilities offered. An efficient school medical service is now regarded as an essential part of the public system of education in all progressive countries.

The objective of the school medical service is the healthy physical development of every school child. Where children are sick or defective, its business is first to ascertain what is wrong and then to ensure that the right treatment is available; where they are in normal health, its business is to give a training in physical activity and in the principles and practice of hygiene, which will make the fit fitter. The former function is mainly medical in scope; the latter is mainly educational. School medical inspection is something much more than collecting statistics of defects, the school clinic something much more than an outpatient dispensary. Sir George Newman, one of the greatest of all authorities on the subject, has defined the purpose of a school health service as "to prepare the child for education and for citizenship" and has described its functions as follows:—

(1) To fit the child to receive the education provided for it by the State. But this must also mean to adapt educational methods to the natural physiological capacity and powers of the child. This involves a study and understanding of the sphere and compass of a child's physiology.

(2) To detect any departures from the normal physiological health and growth, any impairments, aberrations, defects or disease (physical or mental), and advise the remedy or amelioration of them (at the school or otherwise) lest worse befall.

(3) To seek the causes and conditions (external and internal to the body of the child) of such defect and disease, and, as far as may be, prevent them.

(4) To teach and practise personal hygiene in every school, so that a habit of hygiene may be contracted by the children, and the way of physiological life may be followed by each coming generations." Since it is known that the great majority of children everywhere suffer from some physical defect in the course of their school days, it cannot be too strongly emphasised that adequate arrangements for detecting these defects and dealing with them as early as possible are an essential form of insurance against expenditure on education being wasted.

3. In India the problem has special features arising from the poverty of the masses and low hygienic standards, both personal and public, due to poverty and ignorance. The development of public health services in India is also of comparatively recent origin and the responsible authorities have hitherto devoted most of their attention to the more immediate problems of medical relief and control of epidemics. In the twenties of this century, and in a few instances somewhat earlier, schemes were initiated in almost all Provinces for the medical inspection of school children, but the information given in the Joint Committee's Report shows how inade-

quate these were. They were generally limited to important towns, only a few school medical officers were appointed and, where available, the services of Municipal or District Health Officers were utilized. Owing to the dearth of doctors and nurses the schemes have barely touched the fringe of the school population as a whole. Middle and High Schools have received more attention than Primary Schools, where any school medical service should obviously start. Girls have in most cases been left out of these schemes altogether. There has also been no settled policy as to what department of Government should be in charge and the frequency with which they have been started, only to be abandoned after a short period as a measure of economy or for some other reason, indicates that there has been a complete lack of appreciation of their fundamental importance. In no branch of education has financial stringency or parsimony produced more disastrous results.

4. The first need for the medical inspection of children really arises at the pre-school stage and for this purpose it will be necessary to enlist the assistance of maternity and child welfare workers. From the health point of view the age of entry to school, which will bring the child under regular medical inspection, should be five rather than six.

It is estimated that 50 per cent. of the school children in this country will need some sort of medical attention or observation. Experience in other countries shows that a routine inspection of all pupils every year involves an amount of work out of proportion to the results obtained and is not really necessary. The Joint Committee recommend that routine examinations should be held (*a*) on entry into a Basic (Primary) School at approximately the sixth year, (*b*) at the eleventh year and (*c*) before leaving in the fourteenth year. For pupils in High Schools a final examination is desirable at the age of sixteen or seventeen. Children going from a private school without a medical inspection scheme to a secondary school should be given a routine examination as soon as possible after admission. A medical record should be maintained for each child, which should go with the child when he moves from one school to another. In between routine examinations care should be taken by the teachers to bring to the notice of the school doctor cases of defects observed by parents or by themselves. The teacher should also keep a record of the height and weight of each pupil twice a year and bring abnormalities to the notice of the doctor.

The examination should be conducted by a qualified medical practioner of modern scientific medicine, with some special training in refraction tests and in the detection of signs of malnutrition and also in ear, nose and throat conditions. The inspection should take place on the school premises, and if possible in the presence of the parent. The school physical instructor, if there is one, should also be associated with the inspection, as he (or she) may be able to assist in the removal of some defects by appropriate exercises. The doctor should always go through the results of his inspection with the head teacher.

5. In a unit of school population of 80,000 in between the ages of six and fourteen each age-group will contain about 10,000 pupils. On the basis recommended above of 3 routine examinations during the school life, there will be about 30,000 routine examinations to be carried out every year. An equal number of re-examinations and special examinations may also be required; but these will take only half as long on the average as routine examinations. Thus a unit of 80,000 pupils will require the equivalent of 45,000 routine examinations annually. A wholetime doctor is expected to carry out about 5,000 routine examinations in a year, at the rate of 28 examinations per day in 175 school days. 45,000 examinations will accordingly require the wholetime services of 9 doctors with the necessary number of nurses.

6. Medical Inspection is of little value unless it is linked up with treatment of defects discovered and arrangements for following up cases where necessary. Such meagre statistics as are available indicate that the

principal disabilities of the school children in India are enlarged tonsils, adenoids, dental caries, pyorrhoea, malnutrition and defective vision. The removal of defects discovered should be accomplished within the shortest time and with the minimum interference with school attendance. Since malnutrition affects a considerable percentage of children, schemes for treatment should include the provision of supplementary nourishment including a midday meal where necessary. Special arrangements will be necessary for the treatment of dental defects, for the enucleation of tonsils and adenoids and for the correction of the more serious defects of vision and hearing. Simple errors of refraction and diseases of the nose and throat which do not require surgical attention can be dealt with by the school doctor.

The present arrangements for treatment, under which children have to take their chance at general hospitals and waste a considerable amount of time without always getting the attention they require, have been described by the Joint Committee as highly unsatisfactory. The provision of school clinics, well-staffed and equipped with medicines, etc., at convenient distances from schools, will alone provide the right facilities for treatment. If in the initial stage of the development programme the provision of such school clinics is impracticable, the next best plan is to have a separate time, preferably in the afternoon, allotted exclusively for school children at the local hospital. Whatever arrangements may be made in the way of clinics, it will be necessary to treat minor ailments at the school itself. In the transition period, while school nurses in adequate numbers are being trained, the work will, as far as practicable, have to be done by the teacher under instructions from the school doctor. Apart from the immediate treatment of defects, any campaign for the reduction and prevention of disease among school children must be carried into the home, if appreciable progress is to be achieved. In this regard, with the object of enlisting the co-operations of parents, close liaison between teachers and health visitors will be of great value.

7. It has already been pointed out that one of the main causes of health defects among school children in this country is malnutrition: The condition may be due to under-nourishment or an unbalanced diet or both. As regards under-nourishment, the provision of a mid-day meal in school is recognised to be a good thing both for combating malnutrition and for enabling children to benefit by the lessons imparted at the end of the school day. If properly organised, it also affords a valuable opportunity for social training. In many provinces brave efforts have been made to provide mid-day meals or other supplementary nourishment but finance has restricted these to a limited number of areas only, and children in the primary stage on account of their large numbers have been generally left out. As regards malnutrition due to an unbalanced diet, simple text-books embodying the fundamental principles of nutrition should be made available in the different Indian languages. The Nutrition Advisory Committee of the Indian Research Fund Association have already issued a very useful pamphlet in English.

8. The atmosphere of the school and particularly the example set by the teacher have an important influence on the personal hygiene of the pupil. Steps should therefore be taken to ensure that teachers are themselves physically fit. They should be medically examined before admission to a training college and should be re-examined at intervals after appointment to protect their own health and the health of the school population. It should also be made generally known that whatever his other virtues a teacher who does not see to it that both he and his school are clean will not receive promotion. Before the school starts every day there should be a combined health and cleanliness parade.

The buildings in which schools are housed, if they have not been specially constructed for the purpose, should be certified as suitable and hygienic by the local health authorities. Where new schools are constructed, they should conform to the standards prescribed in the Board's report on School Buildings. In all cases due attention should be paid to lighting, ventilation, heating or cooling, the provision of wholesome drinking water and sanitary latrines. Children as a rule will be found to respond quickly to a good environment.

Co-operative efforts by the children for cleaning up the school and its surrounding areas should be encouraged. Such efforts, apart from keeping the children fit and healthy, will help to make them useful citizens.

9. In order to derive the utmost benefit from the medical service it is necessary that the children should receive proper training in hygiene. In this respect the curricula of schools and the equipment and training of the teacher call for special attention. Practical hygiene should be a compulsory subject in all courses for the training of teachers and particular stress should be laid on this subject in the training of teachers for the Pre-Primary and Basic (Primary and Middle) stages. The syllabus in training colleges in this subject needs to be revised and brought up to date so as to equip the teacher to play an efficient part in modern school medical service. In view of the peculiar personal, communal and environmental aspects of hygiene in India, which differ widely from those in a temperate climate, special text-books dealing with Indian conditions are indispensable. A handbook on health education for use by school teachers would also be of great value and in order that the teachers' interest in the subject may be kept alive, frequent refresher courses in hygiene should be provided.

The instruction of children in hygiene should at the beginning be wholly on practical lines and devoted mainly to personal hygiene. The active and willing co-operation of children in health matters is best secured through popular movements and games, *e.g.*, the Junior Red Cross and the Junior Red Cross Health Game. In the higher classes, pupils may extend their activities beyond the school to the community. The Mackenzie School Course of First Aid, Hygiene and Sanitation should be valuable and girls in the higher classes should receive training in mother-craft, combined with visits to child welfare centres.

10. Physcial education in India like the medical service has received more attention in the secondary than the primary stage. As usual also, the physical education of girls lags behind that of boys. The employment of trained instructors is limited to secondary schools and the types of exercises given are in some ceses old fashioned. Many schools have physical training at the end of the day, a time which should be avoided, if possible. All children should receive physical training, though the form it takes may be modified in individual cases in the light of medical advice. In addition to the more formal exercises physical training should include organised games and other useful forms of corporate activity.

The production of satisfactory results from the system of compulsory physical education requires efficiency on the part of the instructing staff and proper administrative organisation. Every Education Department should have at headquarters an experienced and well qualified officer to organise the scheme in schools and colleges. Under him there should be a District Inspector of Physical Education in each district. Until an adequate number of trained physical instructors is available, the appointment of trained whole-time instructors even in the larger Basic (Primary and Middle) Schools will not be possible. District Inspectors of Physical Education may therefore profitably organise training camps for Basic (Primary and Middle) School teachers. Every effort should be made to accelerate the progress of physical education amongst girls and the appointment of well-qualified organisers to look after this is essential.

The development of health consciousness through corporate activities which emphasise physical fitness, social service, nature study, crafts, camp life and other healthful activities, is of the utmost importance and should find its place in the life of every school alongside academic teaching. Among the organisations for corporate activity which exist in schools to-day are the Junior Red Cross, Boy Scouts, Girl Guides, The Hindustan Scouts, the Bratibalaka and Bratachari movements. These organisations are all useful; but there is no reason why schools should not base their corporate activities on a syllabus which embodies the best features of each or those most suited to the locality. At least one period a week should be set apart in schools for some corporate activity, in addition to the time allotted to physical training and games. Through these and other activities, opportunities may be sought for establishing closer co-operation between parents and school authorities.

The health of the school child should be an important consideration in determining both the time-table and the school terms, especially in this country with its varying climatic conditions. Educational authorities should pay due regard to climatic factors and fix the school hours with a view to ensuring maximum mental output with the least possible mental and physical fatigue.

11. The provision of facilities for the mentally and physically handicapped children calls for separate mention. Many of these will probably have to undergo prolonged and specialised medical treatment, and special schools with a separate medical service will be needed. Such pupils may also require teaching during treatment or convalescence under special conditions, which have already received considerable attention in other countries, particularly the United Kingdom.

With regard to the mentally handicapped children who are educable, the establishment of special schools has been considered elsewhere in this report. Apart from the provision of special schools, it will be necessary to take the assistance of specialist medical officers including psychiatrists, educational psychologists and social workers experienced in mental welfare, in dealing with these cases. For this purpose specialist doctors may be associated with the school medical service at least for part-time work. Social workers will be able to seek and remedy environmental causes which contribute to the condition of the child both at home and outside it.

12. In order that the experience of each survey may be available for the subsequent ones, and so that the work may be done better every time and the best scientific knowledge and experience may be brought to bear on the problems arising in school medical work, it is necessary that an opportunity should be afforded for investigating the methods used and the results obtained each year. It will probably be found that the school offers one of the most fruitful fields for research in medicine and health. Provision for research is therefore very important.

13. It has been estimated that 9 whole-time doctors will be required for a school population of 80,000 in the Senior and Junior Basic (Middle and Primary) stages. The total school population of 555 lakhs in these stages would on this basis require the whole-time services of 6,244 doctors. At least another 1,500 would be required for the higher stages of education. In addition to these, specialists of various kinds, dentists and trained nurses will be needed.

According to the report of the Chief Medical Officer of the Board of Education, England, 1938, the school medical service in England and Wales had the following staff—

1. School Medical Officers and Assistant School Medical Officers—

728 calculated in terms of whole-time work, or 1 whole-time officer for 6,220 children.

2. Specialists—

1,065, mostly part-time, for ophthalmic, aural, anæsthetic, X-ray, artificial light and orthopædic work.

3. Dentists—

783 (whole-time), or 1 dentist to 5,780 children.

4. Nurses—

2,798 (whole-time); in addition the part-time services of district nurses the extent of which could not be accurately estimated, were utilised. By the above standards, the requirements of this country should be:—

1.	Medical Officers	8,923	
2.	Specialist Medical Officers	13,053	(part-time.)
3.	Dentists	9,602	
4.	Nurses	34,295	

The following will probably be regarded as a reasonable estimate for India, at any rate for some time to come—

1.	Medical Officers	7,500
2.	Nurses	15,000

The supply of specialists must depend on the expansion of the medical service generally and that of dentists on the actual incidence of dental caries, which is not known but is supposed to be considerably less than in Western countries. Until an adequate supply of medical officers of all types and of nurses is available, it may be necessary to supplement existing provision by Medical Attendants, to whom further reference will be found below.

Of the 7,500 medical officers, about 500 will probably be mainly employed on administrative work and the balance of 7,000 on field work. As all the 7,500 doctors, like the trained teachers, cannot be provided in a short period, a scheme for producing them over a period of 25 years will call for an additional production of about 300 school doctors per year. This total of 7,500 doctors will give an annual wastage of about 250 on the assumption that a doctor's average period of service is 30 years. So, apart from the immediate provision of a substantial number of doctors it will be necessary to train every year about 250 doctors in addition to those required to replenish the public services on the present basis. It is estimated that in India there are about 45,000 doctors, a number entirely inadequate for the needs of such a large population according to the standards of modern countries. The training of women doctors also assumes greater importance in the light of present requirements. The figures given above will serve as approximate calculations only, and it may, in the initial stages, be necessary to employ part-time doctors and nurses. The services of a fairly large number of army doctors are likely to be available on demobilisation, and full use should be made of them.

14. As stated above, in the initial stages it may be necessary to supplement the supply of fully trained school medical officers by means of Medical Attendants. The duties of these officers will be to work in co-operation with the school, the medical service and the home of the pupil. This service should be recruited either from selected teachers, or from other persons with suitable educational qualifications. Their training should enable them to deal with minor ailments, to see that the treatment prescribed by School Medical Officers is carried out and to advise teachers and parents generally about ordinary health matters. The number of such officers should not be less than 7,000, that is, about the same number as the doctors engaged in field work.

15. The figure of 34,295 nurses, worked out on the basis of the figures relating to England, may be regarded as unattainable in India at any rate in the early stages. It would seem reasonable to make provision for about 15,000 nurses. At the outbreak of the war India had only about 5,000 registered nurses and the leeway to be made up here even for the normal services is consequently very great. Plans for training 15,000 nurses will also have to be spread over a peiord of 25 years and this will mean training about 600 nurses annually. Once the standard has been reached, the anual wastage will be about 500 nurses, which should also be taken into account in any future training programme. The stimulus given to the training of nurses by the war may be helpful in achieving an increase in

the production of nurses. In any case, until women with requisite qualifications are forthcoming for the profession in sufficient numbers, it may be necessary to employ a number of male nurses to start with as assistants to the female nurses.

16. The administrative machinery for controlling and supervising the school medical service has received careful consideration by the Central Advisory Boards of Education and Health. They recommend that school medical services, being primarily concerned with education, should be placed under the administrative and finnacial control of the Education Departments. In each Province there should be a Chief School Medical Officer to administer the service, assisted by a sufficient number of doctors for the administrative and executive duties of medical inspection and treatment of school children. As continuity in school medical work is important, a doctor should be deputed for such work for at least four to five years and where possible should devote the whole of his time to it.

As the work will need to be co-ordinated with that of the Medical and Public Health Departments it may be desirable to set up a committee of co-ordination with the Director of Public Instruction, the Surgeon-General (or Inspector-General of Civil Hospitals) and the Director of Public Health as members. In some cases it may not be necessary to appoint a separate Chief School Medical Officer under the Department of Education since it may be possible for the Surgeon-General (or Inspector-General of Civil Hospitals) or the Director of Public Health to act in this capacity.

17. The main conclusions of the Joint Committee of the Central Advisory Board of Education and Health are set out below:—

Introduction and Historical.

(1) The Committee wish to draw special attention to the frequency with which a system of medical inspection has been started in a Province only to be abandoned after a short while as a measure of economy. This indicates that there has not been a clear appreciation of the fundamental necessity for and the essential characteristics of a school medical scheme. The Committee emphasise that satisfactory arrangements for school medical inspection and treatment form an essential part of any efficient system of public education.

Aims and Objects of a School Medical Service.

(2) The Committee consider that the aims and objects of a school medical service, as defined by Sir George Newman, are applicable to India and that it is absolutely essential that steps be taken to ensure that children attending school are healthy and kept healthy. This is necessary not only from the medical but also from the educational point of view.

(3) In developing a school medical service in India a big difficulty is the inadequate number of qualified doctors and nurses. However, in some of the large cities it should be possible to organise school health work on as wide a basis as in the West.

Medical Inspection.

(4) Probably fifty per cent. of the children attending school would be found to require medical attention or medical observation.

(5) Too much weight cannot be given to health considerations in determining the age at which children should be admitted to school. The age of school entry should be not more than six and preferably five.

(6) Many routine examinations of school children in some parts of India are unnecessary. The routine examinations should be (*a*) on entry into a primary school at approximately the sixth year, (*b*) at the eleventh year and (*c*) at the fourteenth year. For children in High Schools when leaving at the age of seventeen a final examination is desirable. Children going from a private school without a medical inspection scheme to a

secondary school should be given a routine examination as soon as possible after admission.

(7) A whole-time doctor may reasonably be expected to carry out 5,000 routine inspections in a year.

(8) A medical record will have to be maintained for each child, which will go with the child when he goes from one school to another.

(9) Height and weight records should be taken not less than twice a year. This work should be done by the teacher.

(10) Medical inspection should only be carried out by a qualified doctor with special training for the work.

(11) Medical inspection should take place in the school during school-hours and if possible the parents should be present. In schools with a physical instructor he should as far as possible be available during the inspection. The doctor should go through the inspection results with the teacher.

Treatment and Follow Up.

(12) A scheme for medical inspection without provision for treatment and follow up is of little or no use. Schemes for treatment must include provision for supplementary nourishment. Special arrangements will be necessary for treating dental defects, tonsils and adenoids and for correcting the more serious defects of vision and hearing.

(13) In urban areas accommodation for school clinics should be provided at convenient centres. In many towns, buildings suitable for the purpose already exist, such as maternity and child welfare centres. Where it is not possible to provide special school clinics, the next best plan is a special session for school children at the local hospital or dispensary.

(14) Much of the minor elementary treatment can be done by the teacher provided he has received the requisite instruction.

(15) Any campaign for the reduction and prevention of disease amongst school children must be carried into the home, if sound progress is to be achieved.

(16) Every effort should be made to secure the interest and co-operation of health visitors in following up the defective school children in their homes.

(17) The lack of contact in every type of school between teachers and parents is a regrettable feature of school life in India, which the Committee feel should be remedied as soon as possible.

(18) As the teacher is the solution of so many of the problems of school health, the Committee urge the vital importance of making the conditions of employment more attractive to the right type of man and woman.

Nutrition.

(19) The children of primary schools are not generally included in the schemes for mid-day meals. The effects of malnutrition on primary school children are not less serious than on children of higher ages. All the children should be given a mid-day meal, whether it is brought from their homes or provided at the school. Parents able to pay should contribute to the scheme.

(20) Simple text-books embodying the fundamental principles of nutrition should be made available in the different Indian languages.

Personal and Environmental Hygiene.

(21) The practice of personal hygiene by school children depends largely on the example set by the teacher. Not only must the teacher's personal cleanliness be of a high standard but his physique and general health must

also be good. All candidates for admission to training colleges and schools should be medically examined. The teacher should be medically examined at intervals as much to protect his own health as to eliminate any danger to the school population.

(22) A daily parade before the school starts gives an opportunity of judging cleanliness standards. It should be a health and cleanliness parade.

(23) Where it is necessary to use ordinary buildings as schools, the responsible educational authority should obtain the advice of the local health officer as to their suitability.

(24) The appointment of a body of experts to report on suitable standards for lighting, ventilation and heating of schools is recommended.

(25) In each school some type of container should be provided in which wholesome water kept under lock and key is made available.

(26) Regarding the provision of latrines, the bored-hole latrine offers a satisfactory solution in most rural and suburban areas.

(27) The effect of posture on the child's health and growth with special reference to the use of desks and seats is a matter of great importance and requires special investigation by experts.

(28) Co-operative effort among the children for the cleaning up of the school and its surrounding areas should be encouraged and suggestions are made for carrying this out.

Teaching of Hygiene in Schools and in Training Colleges.

(29) Instruction of school children in hygiene should begin at the earliest age possible and at the beginning should be made wholly on practical lines and devoted mainly to personal hygiene.

(30) The Junior Red Cross Health Game is an appropriate and valuable means of laying the foundations of a healthy life during the primary school years.

(31) Hygiene should be a compulsory subject in all courses for the training of teachers.

(32) Practical demonstrations should form an important part of the course of training in hygiene for teachers. They should be taught by practice to recognise defects in children and to do elementary treatment.

(33) Text-books on hygiene dealing with Indian conditions are indispensable.

Physical Education.

(34) The Education Department headquarters staff should include a well qualified and experienced officer to organise the scheme for physical instruction in colleges and schools. He should have an Inspector for each District.

(35) The physical instructor should have training in the elementary principles of physiology, of the hygienic mode of life and of nutrition.

(36) Health education should find a prominent place in the programme of study of the physical instructor, the aim being to develop in them the incentive and the ability to train children to practise healthful living and to enable them to co-operate intelligently in medical inspection.

(37) Every secondary school should have a fully trained physical instructor, and his appointment should be a condition for a grant-in-aid.

(38) District Inspectors should organise training camps for physical instruction, lasting about a month, for primary school teachers.

(39) A special effort should be made to accelerate the rate of progress of physical education in girls' schools.

(40) Some period every day during school-hours should be devoted to organise physical activity but undue emphasis on drill is undesirable.

Organised games should form an important part of the curriculum for physical education.

Corporate Activities.

(41) The Education Department should be strongly represented on the Junior Red Cross Committees in order that the potential benefit of this important movement may become more widespread throughout the schools.

(42) The curriculum of the school should be arranged to provide at least one period a week for some corporate activity in addition to physical training and organised games.

(43) A sustained campaign to interest the parents in the school activities and to increase the opportunities of contact between the parents and the school authorities must be undertaken.

(44) Much can be done through education to improve existing health conditions, and the simultaneous education of the child and his parent is an important part of the corporate activities of the school.

Administration.

(45) School medical services should be created in the Provinces.

(46) The administrative control of these, including the necessary budget provision, should be under the Education Department.

(47) In each major Province there should be a Chief School Medical Officer to administer the school medical service, which should contain a sufficient number of doctors for the administrative and executive duties of medical inspection and treatment of school children.

(48) In order to promote co-ordination in regard to school medical work between the Education Department and the Medical and Public Health Departments, a co-ordination committee consisting of the Director of Public Instruction, Surgeon-General or Inspector General of Civil Hospitals and the Director of Public Health should be set up in major Provinces.

(49) In making the recommendation for the appointment of a Chief School Medical Officer the Committee do not regard it as necessarily involving the appointment of a third administrative medical officer at Provincial headquarters. They are of opinion that, in order to secure as much co-ordination as possible and to facilitate the economic use of doctors already in the employment of the Provincial Governments, it may be found convenient for the Surgeon-General or the Inspector-General of Civil Hospitals as the case may be or the Director of Public Health to act as Chief School Medical Officer under the Minister for Education. Whether one of these officers acts as Chief School Medical Officer or a separate appointment is made is obviously a matter for each Provincial Government to decide.

(50) Government control over the efficiency of local school medical inspection schemes should be exercised through the judicious distribution of grants-in-aid to the responsible local bodies. Government grant-in-aid should be at least 50 per cent. of the cost.

(51) The expenditure on the supervising staff maintained at Provincial and District headquarters should be a charge on the Provincial funds.

(52) Continuity in school medical work is vital and the period of deputation of a doctor for this work should be at least four to five years.

(53) In the larger towns the employment of wholetime school medical officers is essential for efficient service and such officers should not be permitted to engage in private practice. A scheme should include primary and secondary schools and it should be a condition of recognition that each school takes part in the scheme.

(54) Medical inspection and treament should be provided free for the children of all primary schools and of the primary departments of secondary schools.

*(55) In secondary schools, particularly in urban areas, the fees charged should include a contribution towards the cost of medical inspection and treatment.

(56) Before a school medical inspection scheme can be drawn up for rural areas a preliminary survey should be made of the medical facilities available and of the ways of supplementing them.

(18) Summary of the main conclusions in this chapter—

(*a*) Provision for ensuring the physical welfare of all pupils and students should be made on the lines set out in the report of the Joint Committee.

(*b*) The cost of the School Medical Service including provision of meals and special schools, etc., has, on the analogy of other countries, been estimated at 10 per cent. of the total expenditure on the schools. Provision has been made for this in the estimates of the cost of the national system at the appropriate stages.

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* **As amended by the Central Advisory Boards of Education and Health.**

CHAPTER IX.—THE EDUCATION OF THE HANDICAPPED

1. In a national scheme of education which provides for all children according to their special aptitudes, it seems only logical that consideration should also be given to those children who are generally classed as 'handicapped'. Little has been done so far in this country to meet the specific requirements of children in this category, and there is much that it could profitably borrow from the experience and achievements of those countries which have been active in this field already. In educationally advanced countries it is agreed that special provision is necessary for subnormal children who fail to keep pace with the majority of their fellows of the same age-group.

The handicapped may be divided into two major groups;

(I) the mentally handicapped, and

(II) the physically handicapped.

2. In schools and in the world outside mental backwardness does not always mean the same thing. Among the mentally handicapped two broad types may be distinguished (*i*) those who are born with intelligence below the average and (*ii*) those who are 'backward' owing to some form of maladjustment or physical ailment, which has caused temporary mental retardation.

Children who are mentally handicapped are not a class radically different from the normal, though the dividing line between normality and abnormality seems to have been rising as civilization has advanced in complexity. Through out the entire range of abilties that children exhibit, the various grades merge almost imperceptibly into one another. A child who appears to be dull at school may not necessarily prove a failure in life. A cut-and-dried classification is not always either possible or desirable. A detailed study of individual cases is required and efforts should be made to trace the particular causes which may be at the root of a child's failure to make due progress at school. Among the 'backward' children, however, two types are generally found:—

(*i*) those who try, and

(*ii*) those who do not try.

In the former category backwardness may be due to—

(*a*) lack of proper guidance in the initial stage of education,

(*b*) wrong methods of instruction,

(*c*) interruption of study due to frequent migration or illness,

(*d*) specific disabilities which only an expert can diagnose, and

(*e*) nervous and temperamental factors.

Among the latter, the causes of backwardness may be—

(*a*) lack of vitality,

(*b*) environmental infinences, *i.e.*, unsatisfactory home conditions,

(*c*) over-indulgence or over-discipline at home, and

(*d*) undetected physical deficiency.

The school medical services will no doubt discover and remedy those that are temporary or curable. There will, in any case, be an appreciable number of children who will need special education only for a limited period, at the end of which they should be able to take their place with their coevals in the normal group.

3. Efforts are being made today to measure the degree of 'backwardness' by reference to a definite objective standard. In the process of selection it is useful to remember that an individual child is much too complex

in his make-up and interests to be explained in terms of a few broad principles. 'Inelligence Tests' have, however, come to be generally regarded as reliable methods and the I.Q. (Intelligence Quotient) or M. R. (Mental Ratio) is considered to be a fairly accurate index of the educable capacity of a child. This method, however, with its stress on abstract thinking has obvious limitations, for children with relatively low I. Q.'s may have other attributes which will enable them to play their part as independent and useful citizens.

On the basis of intelligence tests subnormal children may be put into three groups. Children with I. Q. between 85 and 70 are "dull" children. These children cannot keep pace with the normal group in the ordinary school course. They will always be educationally backward and the chances of their becoming useful citizens will depend upon the development of abilities other than scholastic. The "dull" are able to perform certain tasks calling for a limited degree of initiative and responsibility but will always need a certain amount of sympathetic supervision, if they are to become and remain reasonably efficient.

Children with I. Q. below 70 are usually termed "feeble minded"; they may also be kept in ordinary schools, provided they are only called upon to deal with simple concrete things. Those whose I.Q. falls below 55, *i.e.*, "imbeciles", can find no useful place in the modern world and require special care at home or in institutions.

In Western countries it is estimated that the number of people with an I.Q. less than 55 is approximately 0·3 per cent. of the population. It would appear on that basis that British India has between six to fourteen a population of 1,66,305 which will fit into no kind of school when young and into no occupation when grown up. If the proportion of 1 per cent. is taken as an approximate figure for the number of "feeble minded", there are in the same age-groups in this country 5,54,350 children. The proportion of the "dull" with I.Q. 85-70 is estimated to be about 15 per cent. of the age-group, and on that basis the number of children in the category will be 83,15,250.

4. It is not desirable for psychological or other reasons to segregate the subnormal or backward children in schools. "Dull" children, apart from intellectual incapacity, may be otherwise sane and normal. Although it may be expedient in the course of ordinary grading to separate dull children from the bright ones for a considerable part of their intellectual training, yet since they will have to learn to live in a world with people of all grades of abilities, it is essential that throughout the school life they should have opportunities of mingling freely with their brighter fellows and of sharing with them such work and pleasures as all children enjoy. The mentally handicapped children who are educable should, therefore, remain within the general educational system, though special provision will have to be made for their particular requirements. Special schools may have to be provided for the "feeble minded" at a later stage.

5. The education of handicapped children must, as in the case of the normal aim at enabling them to lead a life of useful service to the community and happiness for themselves. The study of individual children will guide the school in determining what useful habits they should form, what kind of skill they should acquire, what interest and attitude of mind they should be led to develop and what knowledge they should strive for. A carefully planned programme suited to the child's potential abilities, academic and vocational, will enable the child to work towards definite standards. His success should be gauged in relation to his own potentialities rather than in terms of achievements of the normal groups. In short, when it is realized that the understanding of the child is of prime importance and that the subject matter is secondary, then, and only then, can a school help each child to realize his own potentialities.

6. "Those who have had opportunities of watching a successful teacher of a dull and backward class at work have no doubt of the qualities by

which such a teacher shines. In the first place, he shows very clearly that he is thoroughly familiar with children's ways: he is interested in them as individuals; he possesses the power of dividing whatever latent possibility is in them and of inspiring them with his own confidence in their eventual success; he is thoroughly familiar with what appeals to children, he knows how to provide the tasks that will keep them happily and usefully occupied and how to make work that does not at first attract a source of pleasure and profit; he is able to turn the most untoward circumstance to good account and re-direct attention into proper channels when it has become diverted elsewhere; he is generous and open-minded, quick to show sympathy when it is needed but slow to give up hope when things are not going well; he is lively and cheerful himself and his example and influence breed liveliness and cheerfulness in his pupils; he may or may not be distinguished academically, but he will certainly possess a fund of common sense and have an undoubted gift in some direction or other—a gift, perhaps, for dramatic work or for music, or dancing, or games, or craftwork. On the whole, his interests will be active and practical rather than just bookish; he will be wise and resourceful rather than merely clever; and he will be more interested in projects rather than subjects and in children than either".*

Teachers with the qualities described above are not easy to find; but the problem of ensuring the supply of such teachers is inseparably bound up with that of the selection and training of teachers in general. There are not many members of the teaching profession in this country who possess experience in handling dull children over a long period, for acquaintance with the general principles of human development must necessarily be supplemented by class-room experience and hitherto little attention has been paid to the dull or backward child as a specific educational problem. The training colleges will have to face the task almost entirely by themselves since they cannot as in other educationally advanced countries turn to organisations for mental welfare, like the National Institute of Industrial Psychology or the Child Guidance Clinics, for help and guidance.

There are at present only two institutions in India for the education of the mentally handicapped.

(1) Bodhana, Jhargram, Bengal.

(2) The Children's House, Kurseong, Bengal.

The first is the only institution which serves the needs of all communities in India generally, the second is an institution catering for European and Anglo-Indian children only.

7. The physically handicapped may be divided into the following categories:—

(*i*) Those who are deficient in one or more special senses; the blind, the deaf, the deaf and blind, the deaf-mutes, etc.

(*ii*) those who are retarded by motor deficiency including respiratory, heart and orthopaedic cases and

(*iii*) those who are defective in speech.

The number of the physically handicapped according to the census of 1931, modified in the light of expert opinion, may very roughly be put as follows:—

Blind	17,50,000	Delicate (temporarily handicapped)	Not known.
Deaf-mute	2,00,000	Speech-Defective	Not known
Deaf	6,00,000		
Cripple (permanently handicapped)	Not known.		

In the absence of effective remedial measures, climate, customs and quacks must have added considerably to these figures during the last ten years.

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* P. 50, English Board of Education Pamphlet 112

Unfortunately no figures relating to these items are available in the 1941 census.

8. The census of 1931 puts the number of the blind in British India (excluding Burma) at 4,35,078, but census figures can hardly be relied on for educational purposes as there is no standard definition of blindness in this country. If the definition adopted by the English Board of Education be accepted, namely, "so blind as to be unable to perform any work for which eye-sight is essential", expert calculation would then raise the number of the blind population in India in 1941 to about 20,00,000, with about 4,00,000 in the six to fourteen age-group.

What has been done up-to-date to tackle this problem has been very largely due to voluntary philanthropic enterprise. There are in existence 33 societies which are gallantly facing this enormous challenge; of these 25 are for the blind only, 6 are for both blind and deaf, 1 is in combination with a poor asylum and 1 with a cripple home. Altogether they have a total enrolment of 1,156 blind people, of whom 998 are males and 158 females. Of these 987 are children. It will be clear from this how much remains to be done.

If the problem is to be effectively tackled, the services provided must be comprehensive. It is true that in other countries blind welfare work has been pioneered by private philanthropy and the State has come in when private enterprise had already made appreciable progress. This country, however, has waited long enough and the time has arrived when the State should take up the education of handicapped children as a necessary part of the general scheme, though it will no doubt at all times encourage and welcome voluntary assistance. The Board have urged that comprehensive legislation in the general interests of the blind should be promoted on the lines of the Blind Persons Act in Great Britain. Such legislation should ensure among other measures the compulsory education of blind children as well as facilities for vocational training to provide employment for the employable blind and financial help for those who cannot be made self-supporting. As a preliminary to launching an effective schemes for the welfare of the blind it is essential that a special census of the blind persons in India should be taken as soon as possible. It is also necessary to adopt a uniform Braille Code for Indian languages as a whole. Attempts in the past to overcome the linguistic difficulties inherent in this task have failed but last year a special committee of the Board at last succeeded in devising a Uniform Braille Code which will, it is hoped, meet the demands of the Indian languages and win in time general acceptance. It still remains to set up a central press with an up-to-date embossing plant and a workshop for manufacturing necessary educational apparatus together with a central library to serve all institutions in India.

Apart from training facilities for the blind there also should be in every area an after-care department to place those trained in jobs, as well as a research bureau to investigate improved methods of training and new avenues of employment. Special training institutions will also be necessary for training teachers for the blind schools. While the schools with their medical services will do all they can to train and place the blind in life, there are numerous other aspects of the problem, *e.g.*, the prevention of blindness, the education of public opinion, begging, etc., which can only be tackled effectively by an all-India society with the sanction of the State behind it. It is satisfactory to record that the Government of India have recently appointed Sir Clutha Mackenzie to study the problem and prepare a comprehensive scheme for improving the general welfare of the blind population.

9. It is a common practice in existing institutions to combine the education of the deaf, deaf-mutes and other physically infirm with that of the blind. As their requirements are separate and distinct, there should be special institutions for the education of each main category. Deaf-mutes and the stone-deaf require education in a special school for the deaf; the partially deaf, according to the degree of their defelt, should either be taught in a school or class for the partially deaf, or should be placed in the front seats of the class in an ordinary school.

The existing educational provision for the deaf comprises 35 schools with a total enrolment of 1,313 pupils.

10. One of the most notable expansions of the educational and medical services in Western countries during recent years, has been the development of schemes for the education and training of the physically handicapped children, most of whom are commonly known as "cripples." The English Board of Education hold that there are three vital conceptions which lie at the foundations of any sound application of medical science to the amelioration of the condition of the child disabled or crippled by disease or accident—

(1) there must be restoration of the form and straightness of the body;

(2) there must be re-education of the restored functions of the body;

(3) reliance for both restoration and re-education must be placed in the inherent powers of the living tissues of the body, of brain as well as of bone and muscle.

The under-vitalized, the tubercular and the cardiac may be considered together within this somewhat complex group of the physically handicapped. The term "delicate" may be used to cover the sub-group whose deficiencies are more or less of a temporary character. The facilities required for the delicate in many ways resemble those for the permanently handicapped or the "cripples". Fresh air classes and open air schools are the best that educational and medical experts have been able to prescribe for this type of child. The open air school should be a play ground and a school room combined. Climatic conditions in this country would render it necessary to build these schools in localities where the winter is mild and the summer not too trying, *i.e.*, at the sea-side or in hill stations of moderate height.

11. The variety of forms of speech defect and the number of causes to which these defects are attributed make the care, treatment and education of children suffering from such handicaps extremely complicated. The outstanding cases are the speech defects of the deaf and stuttering, which is commonly associated with motor defects. A national survey in U.S.A. revealed that 9 in every 1,000 children are stutterers and that there were in that country about 1 million school children between the ages of five and eighteen so handicapped in speech as to require remedial treatment and training. There can be no doubt that the number of children so affected in this country is very large. Treatment can be provided either in full-time special schools, day or residential, or more easily and economically, in special classes held after school hours so that the children may be free to attend their ordinary classes at other times. It is of course necessary to employ expert teachers and to give individual instruction. It is also important to secure the cooperation of the parents.

12. Another group of individuals should claim consideration from the educationist today. Those with more easily recognized handicaps, whether physical or mental, have received due consideration in educationally advanced countries for many years past but it is only recently that a group, who were usually labelled "criminals," have come to be classified as "socially handicapped" or "social misfits" and regarded as within the possible range of educational reclamation. The problem is one of reclamation rather than segregation. The retributive attitude is being gradually replaced in civilized countries by an educational approach and a modern educational system in this country should provide facilities for the proper training of this group with a view to rehabilitation. With the introduction of a compulsory system of education, which should keep all children usefully oc-

cupied in school, the magnitude of the problem will be to some extent automatically reduced. Child Guidance Clinics will no doubt be established by authorities to deal with delinquent or socially maladjusted children.

13. The Board have considered the minimum educational qualifications and the minimum age for admission to the appropriate courses of training in the case of teachers in special schools for mentally and physically handicapped children and are of opinion that generally the requirements here should be the same as in the case of primary schools. But they emphasize in agreement with what has been stated above that in selecting recruits for such schools special attention will have to be paid to personal characteristics and aptitudes. They, however, recommend that the course of training for the teachers in blind schools should be different and that there should be established a special all-India institution for the training of teachers of this category. The same will apply in the case of teachers of the deaf.

14. In considering the question of accommodation the Board are of opinion that although the average number in a class in the special school for handicapped children should be considerably smaller as a rule than in an ordinary school, this should not be regarded as an adequate reason for reducing the size of any class room below that of the standard unit prescribed for normal children, that is 400 sq. ft. Children with physical defects require more room for movement and often need special furniture, while in the mentally sub-normal class freedom of movement, variety of practical occupations and personal supervision by the teacher all demand ample floor space. Special types of construction will be necessary to meet the special requirements of these schools and it is likely that much experiment will have to take place before the type of accommodation specially suited to Indian conditions can be discovered.

Special schools will, on the whole, be more costly than the ordinary schools and the cost of each type of school will vary with the nature of the special services and requirements involved. The special services, the buildings and equipment, the higher cost of training and the higher salaries of teachers in some cases will all tend to add to the cost of this branch of the educational system. It may be asked whether a country like India could or should afford the money for such special schools, the return for which may not be proportionate to the expenditure involved. The answer is that in a national system intended to satisfy the needs of all it is difficult to ignore the claims of those who are unfortunate through no fault of their own. Moreover, the money spent in educating them may prove a profitable investment in view of the fact that many of the handicapped at the end of their training may be saved from becoming a burden either on private charity or on the State.

Consideration has already been given by the Board to this problem and in 1936 they recommended that the education of the handicapped should not be neglected and asked Provincial Governments to report what the position was in their areas. The general attitude of the Provinces, as indicated by their replies, appeared to be that whatever funds were available should be spent in extending education among normal children. In spite of this the matter was taken up again by the Board last year, when they reiterated their opinion that the provision of special schools for mentally and physically handicapped children should be one of the functions of the State and that the question should receive the earnest and immediate attention of the educational authorities concerned. They also recommended that the Provinces, Local Administrations and major States should make a survey of the mentally and physically deficient population of school-going age, since in the absence of such information no planning is possible. The time has come when State action can no longer be delayed. While in a period of financial stringency there may have been some justification for preferring the claims of the normal, there can be no excuse for neglecting the needs of the handicapped in a scheme of education on really comprehensive lines which is now in contemplation.

15. Summary of the main conclusions in this chapter:—

(*a*) Provision for the mentally or physically handicapped should form an essential part of a national system of education and should be administered by the Education Department.

(*b*) Hitherto in India Governments have hardly interested themselves at all in this branch of education: what has been done has been due almost entirely to voluntary effort.

(*c*) Wherever possible, handicapped children should not be segregated from normal, children. Only when the nature and extent of their defect make it necessary, should they be sent to special schools or institutions. Partially handicapped children should receive special treatment at ordinary schools.

(*d*) The blind and deaf need special educational arrangements, including specially trained teachers. It may be desirable to establish central institutions for training the teachers required.

(*e*) Particular care should be taken to train the handicapped, wherever possible, for remunerative employment and to find such employment for them. After care work is essential.

(*f*) In the absence of any reliable data it is impossible to estimate what would be the cost of making adequate provision for the handicapped in India; 10 per cent. of the total expenditure on Basic and High Schools has been set aside for special services, which include such provision, and it is hoped that this will suffice.

CHAPTER X.—RECREATIVE AND SOCIAL ACTIVITIES

1. In recent years the conviction has been growing that education in the real sense should be a training in the process of social adjustment rather than the mere injection of a special dose of mental, moral or physical instruction. Consequently an important aim of school and college life should be to provide opportunities for social and civic training outside as well as inside the classroom. One means of achieving this aim is by the provision and organisation of recreative and social activities. In the past these activities were mainly organised independently of the teacher and so were "extra-curricular" in the strict sense. In recent years, however, they have been claiming an increasingly important place in the curriculum and demanding greater collaboration and assistance from the teachers.

Recreative activities offer a valuable means of satisfying urges which are inherent in the nature of nearly all young people, *e.g.*, gregariousness, loyalty, sympathy, curiosity, imitation and love of approbation. The child is not born a social being and during the earlier stages of his education he needs to be made to realise that he is a member of a larger social order and that there are units outside himself which he cannot possibly ignore. Recreative activities should offer natural situations in which children can learn subconsciously what they are not so likely to learn in the classroom, the spirit of co-operation and team work both in thought and action. Such qualities as leadership, initiative, resourcefulness and so on cannot be developed simply by studying the usual subjects of the curriculum but recreative activities offer a very wide field for their development. Further, when boys and girls find themselves engaged in activities alongside others of their own age and range of understanding, interests and ideals, the experience so acquired tends to be of a more permanent and useful nature than that obtained from books. Finally, those individuals who are different or have special aptitudes are likely to discover in this wider field some activity for the exercise of their powers.

2. The need for recreation cannot be limited only to the school population: it is a necessity for everyone at every stage of life. For this reason in a national system of education recreation in different forms should be provided for all and so should social services in the wider sense. Local conditions should naturally be taken into consideration, while organising any form of activity. There will be three main fields whose needs must be explored—

(1) The school and college period;

(2) The adolescent period in the case of those who have left school;

(3) Social Service generally.

3. It is not intended to devote much space here to the activities belonging to the school and college stages. These have already established their claim to an increasingly important place in the curriculum and in course of time it is reasonable to expect that they will be regarded in India as no less essential a feature of full-time instruction than they are elsewhere. A brief reference may be made to certain general tendencies and the way to deal with them.

In the early years of Basic education the social impulses of children are only slightly developed. Physically they are not strong enough to take part in the more strenuous forms of sport or socially conscious enough to be enthusiastic about team games. Such activities as gardening, folk dancing, Swedish drill and other forms of physical exercises, Junior Red Cross groups, acting, Cubs and Bluebirds, games (indoor and outdoor), athletics, excursions, and hobbies are most suitable for children up to eleven or twelve years of age. Since the social impulses begin to develop more strongly about the age of 12-13 the onset of adolescence is the time for organising recreative activities of the corporative type. For children of this age, debating, dramatics, organised games, inter-school competitions, etc., should be provided. Young Farmers' Clubs may arouse enthusiasm in rural areas.

Besides the above activities there are many indigenous games in different parts of the country, the full recreative value of which for school purposes has still to be explored.

4. As the pupil passes through the High School and approaches the University stage, he becomes increasingly conscious of the society in which he is moving. The Boy Scout, Girl Guide and similar movements, Junior Red Cross Groups, Debating and Dramatics, Co-operative Societies, Rural Uplift Societies, in addition to his normal games and hobbies, will probably satisfy him up to the end of his High School career but after that he will require something rather more advanced. Moreover, as his social consciousness is enlarged, he will become interested in social activities designed for the benefit of other people than himself. From early in the adolescent period the idea of social service should be inculcated.

For the successful organisation and functioning of recreative activities it is imperative to have ample playing fields and playgrounds. In this connection the Report of the Board's Committee on School Buildings, which outlines the provision required for these in every type of school, should be consulted.

5. In recent years one of the most striking and important educational developments in civilized countries has been the great expansion in the provision and maintenance of recreative facilities for young people in the age-group 14-20, after they have ceased full-time attendance at school. The problem of dealing with young people no longer under school discipline and subject to new experiences, problems and temptations, with which it was impossible to deal adequately while they were at school, is one of the adolescent problems, which has always engaged the attention of educationists and social workers. In addition to moral there are also economic issues, for young people at this stage are often unsettled in their employment and in need of good advice. In the third place there is the need for amusing them and keeping them fit. Progressive employers are increasingly realizing that it is in their own interests as well as those of their young employees to satisfy these needs, but their unaided efforts, particularly in this country, will go a very small way towards solving the problem as a whole.

The principal argument in favour of Day Continuation Schools is that they will contribute largely towards the desired end but even so they can hardly be expected to cover the whole period between the end of full-time education and the age at which a boy or girl can be regarded as a full adult member of society, nor will they cover all the possible fields of desirable activities, particularly on the recreational side. It is not advisable that the amusements of the young should be too obviously under the direction and supervision of authority. To promote the object in view something more elastic is needed and it is hoped to find this in what is now popularly called the Youth Movement. The over-riding purpose of this movement in England, where it is now taking firm root, has been to improve the health, happiness and all-round efficiency of its members. It aims not at superseding but at enlisting the help of all voluntary associations and bodies whose objectives are in line with this general purpose and at filling the gaps where these exist. The main aim must, therefore, be to continue to keep in touch with young people after they have left school and to see that they are provided with healthy amusement and to give them unobtrusive guidance through a number of problems and pitfalls to which they were only rarely exposed while still of school age. The consensus of opinion in America, where this movement is also gaining popularity is, that when compulsory attendance ends, the school leavers have still to be trained in the art of citizenship. The question therefore is a much larger one than that which used to be called "keeping boys and girls out of temptation."

6. In India 320 lakhs of young people come within the age-group 14-20. The problem of dealing with such large numbers is a formidable one.

Valuable as is the work which they are doing, it can hardly be said that the organisations now working in this field, e.g., the Y.M.C.A., Y.W.C.A., the Boy Scout and Girl Guide Movements, the Hindustan Scouts with its Girl Scout section, the Ramkrishna Mission, etc., are adequate and sufficient in number to cater for this large number of young people. An All-India Youth Movement which would aim at coordinating the activities of these bodies, at helping them to extend their range and at supplementing their efforts is what is really required.

One of the main problems in work of this kind is to get and train the right kind of people as leaders. Experience in the West has shown that leadership is the key-stone on which this movement rests. Its success and indeed its existence depend almost entirely on the degree of contact between leaders and class members, so that the personality of the leader is of paramount importance. The good youth leader must have sound technical training, some knowledge of psychology (gained practically rather than theoretically), understanding, adaptability, a sense of value, a sense of humour, a power of arousing enthusiasm and last, but not least, tact.

At the end of the war a number of officers and others who have occupied positions of responsibility in the services will be demobilised. It is not suggested that military discipline is required in a Youth Movement; very, far from it. But the people in question will presumably have exhibited some of the qualities of leadership and may be suitable for training as youth leaders. They may also be better able than others to deal with the demobilised soldier, who finding that he has not returned to a country fit for heroes to live in may again constitute a serious social problem in a post-war world.

7. In a country so large as India or with such varying conditions it is unwise to attempt to prescribe in too great detail the type of activities that the Youth Movement should provide.

Experience in the West has shown that the following are among the activities which have a wide appeal: (1) Games' clubs of all kinds; (2) Social clubs of all kinds, particularly in towns; (3) Young Farmers' clubs; (4) Organised excursions; (5) Hiking; (6) Youth Hostels. Scouting, Girl Guiding, Junior Red Cross and other similar organisations which are commonly found in schools and colleges, also appeal to young people of this age-range. In addition to the above, practical activities such as cooking, first aid, arts and crafts (sewing, knitting and weaving), mothercraft (child hygiene and care of the young), as well as music, dancing and games should be provided for Indian girls and young married women. In fact any kind of activity which brings young people together for the purpose of enjoying themselves healthily or giving joy to others should be included among the activities of the Youth Movement.

8. In organising a Youth Movement in this country full advantage should be taken of past and recent experience in Western countries, particularly England and America. It must be borne in mind that such a movement should make use wherever possible of voluntary organisations and work through them. Only where these fail should the State directly intervene.

While Provincial or smaller areas, *e.g.*, districts, must remain the primary units for organisation, an All-India Youth Committee should be appointed to give central guidance and advice and to assist the development of the movement by training leaders and by givnig financial assistance where necessary.

The ultimate object is to have in each Province 2 District Organisers (1 man and 1 woman), and 4 Assistant Organisers (2 men and 2 women) for each district. As there are 226 districts in the whole of British India, the number of District Organisers will be 452 (half of these will be women), and Assistant Organisers 904 (half of these will be women). Two Central Training Institutions are envisaged, one for training men organisers and the other for women, since the training will involve two distinct types of technique. To begin with it is proposed to train 100 men and 100 women organisers each year and the process will go on until the required number is reached for each kind. The duration of the training period will be not less than one year. Training centres will also be used for training part-time as well as full-time leaders and for giving refresher courses and such further training as experience may suggest.

9. The third phase of recreative and social activities extends to the whole field of social service. There is no need to stress the importance of this in a country like India where the standard of living of the masses and the amenities of life generally are so much inferior to those which obtain in many other countries. What should be done to organise social service more effectively has been set out in the report of the Committee appointed by the Board in 1940 to consider this subject. Its main conclusions are summarised below:—

(1) (a) There should be established in India, preferably at Delhi, a centre in which an impartial and thorough examination of the problems connected with the Social Services and Public Administration in its relation to the Social Services, could be carried out.

(*b*) For this purpose a central body, to be called the All-India Council of Social Service, should be set up with an institute for research under its control.

(*c*) In order that the central institution might be at all times in close touch with practical problems and have some place where actual experiments could be carried out it would be extremely desirable that there should be closely associated with it, if not under the same direction, a training school for social workers.

(2) In each province and other large administrative areas there should be at least one centre affiliated with the All-India Council the main object of which would be to stimulate and co-ordinate the work of social service agencies, voluntary and official in the area and to arrange for the training of social workers of all grades.

(3) Training in social work should be given to the officials of public departments concerned with the social services as well as to the workers of voluntary bodies.

(4) Every University in India should have a department for extra-mural work in charge of an officer who has had a thorough training in Social Service.

(5) As most of India's population is in the rural areas, corresponding importance should be attached to training for service in rural areas persons with a real knowledge of and interest in country life.

(6) The composition of the proposed All-India Council of Social Service and the staff of the proposed Central Institute and their remuneration should be as set out in paragraphs 11—14 of the report.

(7) The annual recurring cost of the Central Institute estimated at between Rs. 75,000 and Rs. 1,00,000 should be borne by the Government of India for an initial period of five years.

(8) Every effort should be made to build up an endowment fund which would make the Central Institute self-supporting within a reasonable period.

10. **Summary of the main conclusions in this chapter:—**

(*a*) The provision of recreative and social activities on an adequate scale is an essential feature of any modern educational system.

(*b*) Apart from the needs of boys and girls in schools and colleges special attention should be paid to those in the 14—20 age group who are no longer attending school. To serve these a Youth Movement on an All-India basis should be set up.

(*c*) A Youth Movement should aim at co-ordinating and supplementing rather than superseding the work of organisations already dealing with aspects of this problem.

(*d*) The main need of a Youth Movement will be for leaders, both men and women, who will have to be specially trained. The possibility of finding suitable recruits among demobilised Officers and N. C. O's. should be explored.

(*e*) The provision of social and recreative facilities for adults should form an important part of any Social Service Scheme. Reference is invited to the report of the Board's Committee on Social Service and Public Administration (1941).

(*f*) It is impossible to estimate the ultimate cost of the provision contemplated in this chapter. Rs. 1 crore may be included in the estimate.

CHAPTER XI.—EMPLOYMENT BUREAUX

1. The Employment Bureau is an essential adjunct to any educational system. In one sense schools and colleges are the factories which turn out what are potentially the most important and valuable of all of a country's products, viz., its future workers and citizens. It may seem strange that education authorities should take less trouble than other manufacturers to find a market for their output, but in India this is unfortunately the fact. Hardly anything is done to advise parents as to the occupations for which their children are most fitted or to place those leaving school or college in suitable posts. The fact that openings to progressive and remunerative employment in India are more restricted than in most other countries makes the absence of such a service all the more regrettable.

2. The main functions of an Employment Bureau may be summarized as follows:—

(*a*) to establish contact with all schools from which on completing the course boys and girls normally enter employment and to advise parents and head teachers in the light of (*i*) school records, (*ii*) aptitude and other tests, (*iii*) the openings for employment available in the area, as to the occupations which leavers should seek to enter;

(*b*) to establish contact with employers of Labour in the area with a view to (*i*) ascertaining what openings are likely to be available and the essential qualifications for filling them, (*ii*) persuading employers to recruit their employees through the Employment Bureau, (*iii*) minimising so far as possible blind-alley occupations;

(*c*) to place in suitable employment those leavers who have not already obtained posts for themselves;

(*d*) to arrange for the after-care of young workers especially in order to deal wih misfits (Experience in Great Britain has shown that it is normal for young workers, particularly in the lower grades of Labour, to change their jobs several times before settling down); and

(*e*) to establish and supervise in co-operation with employers regular systems of apprenticeship in those trades for which these are suitable.

3. The senior members of the staff of an Employment Bureau must be carefully selected persons of both sexes with specialist qualifications. Since it is essential that they should be familiar with school organisation and with the psychology of children, particularly adolescents, some practical experience of teaching is necessary. First-hand experience of industrial conditions is desirable but not so important. It may however, be regarded as essential that all Employment Officers should undergo a course of Applied or Industrial Psychology, including aptitude and intelligence testing. Special arrangements will have to be made to set up such courses and it is possible that the services of the experts now engaged in selecting Officers and N. C. O's. for the Fighting Services may become available after the war and form the nucleus of the organisation required.

4. The Employment Bureau should be regarded as an integral part of the educational administrative service and under the direct control of the Director of Public Instruction. Whether it is centralised or has a number of local branches is a matter to be decided in the light of local conditions but in the larger provinces at any rate it will certainly be necessary to have branches at all the headquarters of the Provincial Educational Districts and probably at the other large centres of population as well.

The Employment Bureau should be responsible for leavers from all types of Senior Basic, Junior Technical and High Schools. Universities and other institutions of University rank should preferably have Employment Bureaux or Appointment Boards of their own since their graduates will probably seek employment over a wider area but there is no reason why they should not make use of the Education Department's facilities, if they wish to do so. It would serve a useful purpose if in all larger schools and colleges at any rate there were "careers" masters and members of the staffs with the specific duty of maintaining close contact with the Employment Bureaux.

In Great Britain the Employment Bureaux for school leavers originally formed part of Employment Exchanges under the control of the Ministry of Labour. Experience, however, showed that school leavers require specialised treatment by people familiar with educational conditions and it was agreed that the work of Juvenile Employment, including Unemployment Insurance, should be handed over to those Local Education Authorities which were prepared to undertake the task. Before the war most of the larger Authorities had already accepted the responsibility. In India Employment Exchanges have not yet been establishd, though the Labour Tribunals set up for war purposes may provide the basis for such an organisation after the war. In any case they should have collected data which will be valuable for Employment Bureaux. It cannot, however, be too strongly emphasised that these Bureaux, which are concerned directly with the output of educational institutions should be under the control of the Education Department.

5. In the absence of any experience under Indian conditions it is impossible to form any accurate estimate of the probable cost of establishing Employment Bureaux on a national scale. So far as British India is concerned, the average number of leavers who will come within their purview annually will be 52,00,000 from Senior Basic Schools and 12,00,000 from High Schools. About half of these will be girls. Of the Senior Basic School leavers, at least three-quarters will come from rural areas and the great majority will go to work on the land when they leave school. These will make a comparatively small demand on the services of the Employment Bureau.. Of the remainder, until it becomes more common for girls to enter industrial or commercial occupations, the main avenues of employment for girls will be in teaching, nursing and similar avocations, recruitment to which will be made as a rule directly through the schools.

The clientele of the Employment Bureaux will therefore mainly consist of boy leavers from Middle Schools in urban areas, from Junior Technical and Industrial Schools and those boy leavers from High Schools of various types who do not intend to proceed to Universities or other places of further education. An annual expenditure calculated at the rate of Re. 1 per school leaver, viz., Rs. 64,00,000 should cover the ultimate cost of Employment Bureaux.

6. **Summary of the main conclusions in this chapter:—**

(*a*) Employment Bureaux form an essential part of educational administration: they are especially necessary in India in view of the restricted openings at the moment for progressive employment.

(*b*) Employment Bureaux, if they are to fulfil successfully the functions set out in this chapter, must be staffed by trained experts with practical experience of teaching and of industrial conditions.

(*c*) While contact should be maintained with Unemployment Exchanges Labour Tribunals, etc., established by other Departments, Employment Bureaux which deal with the output of educational institutions, should be under the control of the Education Department.

(*d*) It is estimated that the gross annual cost of running Employment Bureaux (apart from those separately established by institutions of University rank) will amount to Rs. 64,00,000. This should be regarded ultimately as a normal part of administrative expenditure.

CHAPTER XII.—ADMINISTRATION

1. No scheme of educational reconstruction will produce the desired result unless it is administered with vision and efficiency. The new arrangements set out in this report, in view of their scope and complexity, will create problems which will call for the exercise of both these qualities in a high degree.

Apart from a number of educational institutions of an All-India character, which together with the Centrally Administered Areas come under the control of the Government of India, responsibility for all forms of education in their areas rests with the Provincial and State Governments.

2. No attempt has been made in this report to deal in any detail with the problem of the organisation of public instruction in the Indian States. Some of the larger States are already in advance of the rest of India in the provision which they make in this respect and it may be assumed that they will be anxious to keep pace with any reconstruction scheme that may be introduced in British India. In the case of those States which do not constitute economic units for educational development on a large scale, the solution may be found in grouping them where geographically convenient or in attaching small states to larger ones which are contiguous. Small isolated states may also arrange to participate in the facilities of the nearest educational unit in British India. It will clearly be desirable that arrangements should be made particularly in the higher stages of education for all States to have access to institutions in British India and *vice versa*.

3. So far as British India is concerned, it would seem inevitable that for geographical, historical and other reasons the Provinces should remain the main units for administrative purposes, except in regard to University and higher Technical education, which will be dealt with later. It is true that in several respects some of them are by no means ideal as administrative units for education. It is also clear that the establishment of a national system on the scale contemplated in this report will involve (*a*) much closer co-operation between the Central and Provincial Governments, (*b*) the breaking down of inter-Provincial barriers, (*c*) financial arrangements weighted in the interest of the poorer areas.

4. With regard to (*a*) there can be little doubt as to the necessity of an All-India system of education being planned on an All-India basis and this for economic and other reasons will involve close co-operation between the Centre and the Provinces. In virtue of what has been achieved in recent years the Board feel that their constitution may provide the frame work for the co-operative machinery required, though it will need to be strengthened and provided with enlarged authority and an adequate staff Apart from the need for national planning and for co-ordination of effort on a national basis as the plans are carried into effect, the consequential reform of educational finance, whatever the precise form it may take, will almost certainly involve some kind of subsidy from Central to Provincial revenues. This need not, however, entail any onerous interference by the Centre in Provincial affairs: indeed in the Board's opinion it would be impracticable as well as undesirable for the Centre to intervene in the sphere of local administration. At the same time there will have to be some effective liaison between the Central and Provincial Education Departments in order that the former may not only advise and assist the latter in conforming to the general scheme but may also ascertain that the central subsidies are being spent on approved developments. A similar arrangement has been working in England for many years with surprisingly little friction and increasing benefit to all concerned; once a consciousness of identity of interests has been established there is no reason why a similar degree of cordial co-operation should not be achieved in India. The prospects of this will be substantially enhanced, if arrangements can be made for the

interchange of administrative officers on the lines envisaged by the Board in their report on the Recruitment of Education Officers, 1943.

5. With regard to (*b*) it is clear that the location of technological and research institutions must be largely determined by industrial and commercial requirements and not by Provincial areas. It is at the same time essential that in a national system students, whatever their place of origin, should have access to those institutions which provide the special training which they need. To make this possible reciprocal arrangements will be required for the admission of students and there must be an All-India body to see that these arrangements are effective and generally to control and co-ordinate development. Suggestions as to the way in which a National Council for Technical Education should be constituted have been made in Chapter V.

The arrangements proposed for ensuring co-ordination of University education on an All-India basis have been set out in Chapter IV.

6. With regard to (*c*) it is impossible to forecast at this stage what form the future arrangements for financing a national system of education will take. That they will require a drastic change in the existing system is obvious and that substantial assistance from Central revenues will have to be forthcoming is extremely probable. This assistance may take the form of block grants for approved schemes or for a period of years or of a percentage of approved expenditure, which may vary at different stages of education, or of a percentage of expenditure under various headings such as teachers' salaries, special services and so on. But whatever the form it takes, unless the whole cost of education becomes a charge on Central revenues, which is unlikely, it will be equitable to "weight" the formula adopted in the interests of those Provinces whose own revenue-producing capacity is below average.

It will be for Provincial Governments to make such changes in their administrative arrangements as may be necessary to enable a reconstruction scheme on a large scale to be carried out properly. It may, however, be useful to make certain observations in the light of past experience.

It appears to be generally agreed by those competent to judge—Provincial reports have been eloquent on the subject for years past—that a great mistake was made when the administration of education, particularly in the lower stages, was handed over to local bodies. In theory it is a good thing to enlist local interest in education and there is much to be said for delegating a certain amount of control to local bodies, provided that they are competent to exercise it. In practice, however, irremediable harm has been done by handing over responsibility for the education of the rising generation to bodies whose members are in the main uneducated or uninterested in education or both. The situation becomes still worse when local bodies do not possess the funds which they would require to discharge their duties properly, even if they were willing and able to do so. It is unnecessary to repeat here the charges of irresponsibility, incompetence, ill-treatment of teachers, religious and political bias, nepotism and other forms of graft which make such frequent and gloomy reading in the Provincial reports. It is significant that several of the popular Governments which attempted to introduce educational reforms on a large scale, found their efforts to a large extent vitiated by the apathy and incompetence of local bodies.

8. It would, therefore, appear essential that before embarking on their reconstruction programmes Provincial Governments should resume all educational powers from local bodies, except where they are satisfied that these are competent to undertake the enlarged responsibilities. In order, however, to retain local interest in education as far as possible it is contemplated that where sufficient people with the requisite knowledge, enthusiasm, integrity and standing are prepared to offer their services, School Boards should be established to deal with Basic (Primary and Middle) Schools in areas of suitable size as well as bodies of School Managers for individual

schools. The members of these bodies in both cases should be nominated by the Provincial Education Department and it cannot be too strongly emphasised that they should on no account be set up, unless enough people of the right kind are available to serve on them. Schools maintained by private bodies will as a rule have boards of managers of their own. The School Board should appoint one or more of its members either to serve on the Managing Body of each recognised school (Government or Aided) in its area or, where there is no managing body, to take a personal interest in the welfare of the school. The powers of these bodies may be gradually enlarged, as and when they prove their value but should in no case include any control over the appointment, promotion, transfer or dismissal of teachers. Where such bodies after a reasonable period of trial show themselves apathetic or inefficient, they should be at once abolished.

As enlightenment spreads and interest in education increases, it may be both desirable and practicable to establish Education Committees for larger districts with such functions, advisory and/or executive, as circumstances may suggest and at the Provincial centre an Advisory Board on somewhat similar lines to the Central Advisory Board of Education.

9. Whatever may be the precise form of the administrative arrangements which Provincial Governments may regard as essential in order that a national system of education may be established and controlled on efficient lines, it is obvious that its success must very largely depend on the calibre of the paid administrative service. Here as elsewhere drastic changes in the existing system will be necessary.

Two years ago the Bengal Government called the attention of the Board to the serious deterioration in the standard of the educational administrative service. They ascribed this partly to the gradual dying out of the Indian Educational Service but mainly to the deliberate depression of the status and emoluments of Education Officers in comparison with those of officers of other Imperial and Provincial Services and to the prevailing practice of filling vacancies in the higher grades by promoting from the lower and thus precluding the recruitment of candidates with first-class qualifications who would not be prepared to apply for entry to the lower grades. All the other Provincial representatives on the Board echoed Bengal's concern and a Committee was appointed to examine the question of the recruitment of Education Officers. The report of this Committee, to which reference has already been made, was unanimously adopted by the Board at their meeting in January 1943. It advocates the following grades and salaries for Education Officers:—

Assistant Inspectors	Rs. 150—10—250 (Efficiency Bar)/10—350 p. m.
Deputy Inspectors	Rs. 250—15—550 (Selection Grade)/20—750 p. m.
Grade I	Rs. 400—25—1,000 p.m.
Special Posts, including Chief Inspectors (Male and Female), Deputy Directors of Public Instruction, Directors of Public Instruction.	The number and remuneration of these will mainly depend on the size of the area.

10. The need for creating a strong Education Department at the Centre in order to provide the stimulus and assistance which the establishment of a national system of education will require has already been mentioned, and it is obvious that the essential co-operation between the Centre and the Provinces would be facilitated and strengthened, if the senior officers of both were not only interchangeable but also conscious of belonging to the same service. While the Board, however, accepted the view of their Committee that as things now are, the establishment of an All-India education service in succession to the Indian Educational Service was impracticable, they emphasised the need for arrangements for the interchange of administrative officers between the Provinces and the Centre and between one Province and another. The administrative problems raised by the introduction of a national system of education are so vast and complicated that they necessitate further consideration of this particular point. A possible solution may be that there should be one senior educational service for the whole of British

India but in order to ensure a fair amount of representation to individual provinces some posts should be filled through the Federal and others through Provincial Public Service Commissions, the number in each case to be determined according to the ratio which the approved establishment of such posts in the Central or Provincial service, as the case may be, bears to the approved establishment for the whole country. Officers appointed through either channel should be regarded as equal in status and equally eligible for promotion or for transfer. It need hardly be added that the remuneration and general conditions applicable for this proposed service must be such as to make it not less attractive than other senior Government services.

11. Another point needs stressing. The Director of Public Instruction should be responsible to Government for the general administration of education (other than University and higher Technical education) throughout the Province. For this purpose he should be Secretary for Education, if such a post is really necessary, as well as Director of Public Instruction. There can be no possible justification for interposing an officer without an expert knowledge of education between the Director of Public Instruction and the Minister or Board to whom he should be directly responsible.

12. Steps must also be taken to ensure closer co-ordination between a national education service and the other services with which it is closely connected. Complaints have not been unknown in the past that Commissioners, Collectors and other district officers have been ignorant of or have even deliberately ignored the policy of the Provincial Government in regard to education so far as it has affected their particular areas. The extent to which the successful functioning of a national system of education will depend on the co-operation of all concerned need hardly be emphasised, and it may be assumed that when such a system is introduced, both the Central and Provincial Governments will take steps to see that their policy is not only known to but is also loyally carried out by all their officers, whatever their status may be.

13. Summary of the main conclusions in this chapter:—

(*a*) The Provinces should remain the main units for educational administration except in regard to University and higher Technical education, the activities of which should be co-ordinated on an All-India basis.

(*b*) In the event of the Indian States taking part in educational development on an All-India scale it may be necessary in order to form economic educational units to group the smaller ones or attach them to larger States or contiguous Provinces.

(*c*) A national system of education will require much closer co-operation, financial and otherwise, between the Central and Provincial Governments.

(*d*) Provincial Governments should be left to make such changes in their administrative arrangements as the carrying out of education developments on the scale contemplated may require. Experience, however, suggests that they would be well-advised to resume all educational powers from local bodies, except where these are functioning efficiently.

(*e*) In order to enlist local interest in education, School Managing Bodies, School Boards and District Education Committees may be constituted, if and when sufficient people of the right type are available to serve on them. An Education Advisory Board for the whole Province may be desirable.

(*f*) A strong Education Department will be required at the Centre and in this connection the scope and functions of the Central Advisory Board should be enlarged.

(*g*) Steps should be taken in accordance with the recommendations of the Board's Committee on the Recruitment of Education Officers (1943) to check the present deterioration in the status and calibre of the educational administrative service and to enable it to secure the services of the type of officer who will be capable of carrying a scheme of the kind contemplated into successful operation.

(*h*) Arrangements should be made for the exchange of officers between the Centre and the Provinces and between one Province and another. The desirability of establishing a senior educational administrative service on an All-India basis should receive consideration.

(*i*) The Director of Public Instruction should be directly responsible for the general administration of education, other than University and higher Technical education, throughout the Province. He should also be Secretary for Education, should it be thought necessary to keep in existence a separate post of this kind.

(*j*) Provision has been made under each separate branch of education for the cost of administration which may be estimated at 5 per cent. of the gross annual expenditure.

CONCLUSION

[The figures and estimates contained in this report refer, unless otherwise stated, to British India only.]

From the figures given at the end of each of the foregoing chapters it will be seen that the estimated annual cost of the various branches of a national system of education on the lines recommended therein, if rounded off to the nearest lakh, will work out as under when the system is in full operation. It should be fully realised that these estimates are based on pre-war standards both in regard to population and cost of living.

—	Estimated gross annual expenditure	Estimated income from sources other than public funds	Estimated net expenditure to be met from public funds
	Rs. in lakhs.	Rs. in lakhs.	Rs. in lakhs.
1. Basic (Primary and Middle) Education .	200.00	...	20,000
2. Pre-Primary Education . .	3,20	...	3,20
3. High School Education . . .	79,00	29,00	50,00
4. UniversityEducation	9,60	2,90	6,70
5. Technical, Commercial. and Art Education .	10.00	2,00	8,00
6. Adult Education	3,00	...	3,00
7. Training of Teachers . , . .	6,20	1,70	4,50
8. School Medical Service* . . .	...	...	...
9. Education of the Handicapped* . .	...	...	...
10. Recreative and Social Activities . .	1.00	...	1,00
11. Employment Bureaux† . . .	60	...	60
12. Administration‡	...	...	...
Total .	312,60	35,60	277,00

* An amount equal to 10 per cent. of the gross expenditure at the appropriate stages has been provided to meet the cost of the School Medical Service and Education of the Handicapped.

† Special provision has been made for this service in the beginning: ultimately it should be absorbed in Administration.

‡ Provision to cover the cost of Administration has been included at all stages. It is assumed that this will approximate to 5 per cent. of the gross expenditure.

It would appear from the statement above that the annual net cost of a national system of education, when in full working order, will amount to Rs. 277 crores approximately. From this should in theory be deducted the amount of money now being spent from public funds on the provision of various forms of education and some deduction should in fact be practicable in the initial stages. In 1940-41 out of a total expenditure of about Rs. 30 crores, Rs. 17½ crores came from public funds. As already explained, however, it has been thought advisable to work out the cost of the national system as if a start had to be made from the very beginning and it may be desirable to reckon the sum now spent on education from public funds as a reserve towards meeting the cost in part at any rate of providing for the prospective increase in population during the period which must elapse before a national scheme is in full operation.

2. For reasons explicit in the report it would be impossible, even if all the funds required were available, to give complete effect to the proposals which it contains in a period of less than 40 years. While it is impracticable, at so early a stage and before plans on a provincial basis have been prepared, to indicate the precise steps necessary to implement a scheme of this magnitude, it may be suggested that the first five years should be devoted to planning, propaganda and particularly to the provision of the institutions necessary for training teachers and that thereafter the actual carrying out of the scheme should be divided into seven five-year programmes, during each of

which an area or areas—there is no reason why these should be contiguous provided that each is of adequate size—should be fully dealt with. The size of these areas in the case of each Province will be determined during each programme period by various factors, of which the supply of teachers available will be the most important.

3. The table below indicates very roughly indeed the probable incidence of the additional expenditure involved by the scheme outlined in the preceding pages. It assumes that during the first five-year or preparatory period expenditure on education will increase by Rs. 10 crores. This is a purely hypothetical figure and how the cost will be distributed over the different areas or over the different branches of education in each area it is impossible to forecast at this stage. While in most cases the bulk of it will no doubt be spent on training administrative and organising personnel, on experiment and research and on establishing colleges for training teachers of different types, it is possible that a considerable amount will have to be devoted to technical instruction and research, particularly with a view to supplying the technicians required for other urgent spheres of post-war reconstruction. In some areas also the responsible authorities may desire to devote any extra money available to bringing their existing provision up to standard before exploring new fields.

After the first five years the incidence of expenditure has been calculated in accordance with the estimated output of additional teachers, which, as already explained in Chapter VII, will depend largely on the expansion of the High School system. On this basis and on that of pre-war standards both in regard to school population and cost of living, the figures for the first twenty years have been worked out as accurately as possible. Thereafter they may be taken as an approximate indication of the rate at which expenditure will increase until the peak of expenditure on the scheme is reached. Owing to the incremental factor in teachers' salaries this will be a few years after the scheme itself has been fully implemented.

TABLE

Approximate incidence of increased cost of education involved by the adoption of the Board's proposal.

			Rs. in lakhs.
5th year	10,00	25th year	106,00
10th year	23,80	30th year	165,00
15th year	37,40	35th year	250,00
20th year	61,45	40th year	312,00

N.B.—It is assumed in the above table and throughout this report that capital expenditure on school sites and buildings will be met out of loan in future. Provision has accordingly been made for interest and sinking fund charges only.

4. It will be quite clear that in whatever way the financial responsibilities for a national system may be divided between the Central and Provincial Governments, the total expenditure involved will amount to a figure which will render necessary a drastic reconsideration of the whole basis on which education is financed. Any re-allocation of the financial burden between the Centre and the Provinces should also have regard to variations in the revenue producing capacity of different areas. These questions must be settled before any start is made, because even though, as indicated in the table, the sums required during the early programme periods may not perhaps appear to be beyond existing resources, it must be realised that the pace will accelerate in the later stages and that once a beginning has been made there can be no stop until the end has been reached.

5. In regard to the large financial issues raised by these proposals, the Board realise that the cost of education like that of other essential services must ultimately be met out of current revenues and that this will not be possible unless the taxable capacity of the country is increased many times. For this they can only look to an all-out development of the national resources through a rational expansion of industry on the one hand and

the improvement of agriculture on the other. They believe, however, that neither of these will be possible without a wider extension of educational facilities and the spread of enlightenment and expert knowledge which this will promote. Indeed they are convinced that the development of India's economic resources and the expansion of her social services are inseparably connected and must proceed side by side. To enable a start to be made some risk, perhaps even a great risk, must be taken and the Board recommend that for this purpose the early stages of development will have to be financed out of loan or out of such capital balances as may be available. In no other way can a vicious circle be broken. It is true that some diversion to the social services of sums now devoted to defence may be possible in the post-war period and there is reason to believe that a Government prepared to face difficulties might succeed in releasing for these services substantial sums now in the possession of religious bodies after fully safeguarding the legitimate claims of the bodies concerned. Whatever might accrue, however, from such sources could be no more than a useful contribution towards the total cost which would ultimately be involved. The great bulk of it can only be met out of expanded revenue. The Board have examined with the attention they deserve various proposals which have been put forward with the object of reducing the financial burden of education on a national scale. Of these the most interesting and significant is the Wardha Scheme which was issued under Mr. Gandhi's auspices some years ago. This aimed at raising the standard of craft work in basic schools to such a pitch that the sale of articles produced by the pupils would defray wholly or largely the cost of the instruction. While the Board gladly recognise that this scheme contains much sound educational doctrine which, as mentioned in Chapter I, they have not hesitated to incorporate in their own system of basic education, they are convinced that its financial expectations, even in the very doubtful event of their being realisable under any circumstances, could only be realised at a cost of educational efficiency which they are not prepared to contemplate. They are, therefore, driven reluctantly to the conclusion that if India wants a proper system of education, she will have to follow the practice of other countries and pay for it.

6. This report began with a maxim from the West; it may appropriately conclude with a proverb from the East. There is a Chinese saying:

> "If you are planning for one year, plant grain;
> If you are planning for ten years, plant trees;
> If you are planning for a hundred years, plant men."

Trees may mature more slowly and men more quickly in India than in China but the moral applies to both.

The aim of this report, whatever its imperfections, is to provide a plan for planting the men and women, without whom India cannot possibly fulfil the high destiny which the Board believe to be hers.

(Signed)—

Jogendra Singh (*Chairman.*)

W. H. F. Armstrong.
P. N. Banerjea.
C. V. Chandrasekharan.
Maurice Gwyer.
*M. Afzal Husin.
†Pir Illahi Bakhsh.
‡Mirza M. Ismail.
W. A. Jenkins.
Abdus Samad Khan.
§Tamizuddin Khan.
V. T. Krishnamachari
§Sayidur Rahman.
Renuka Ray.
‖M. Ruthnaswamy.
Mohd. Samin Jan.
John Sargent.
H. N. Sen.
Shah Alam.
Leonard G. D. Silva.
Ujjal Singh.
¶R. M. Statham.
Malini B. Sukthankar.

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* Subject to the note on pages 96—99.
† Subject to the note on page 100.
‡ Subject to the note on page 99.
§ Subject to the note on pages 99-100.
‖ Subject to the note on pages 100-101.
¶ Subject to the note on pages 102-103.

GEORGE LAHORE.
G. L. MEHTA.
K. RAMUNNI MENON.
GODAVARIS MISRA.
S. MOOS.

I. H. TAUNTON.
S. C. TRIPATHI.
W. G. P. WALL.
P. F. S. WARREN.
ZIAUDDIN AHMAD.

D. M. SEN (*Secretary*)

January 19th, 1944.

[The members of the Board, who were not present at either of the meetings at which this report was discussed, have not been asked to sign it with the exception of Sir Meverel Statham, who came to Baroda but was prevented by illness from attending the meeting. He has signed the report subject to his note on pages 102-103.]

*NOTE BY KHAN BAHADUR MIAN M. AFZAL HUSAIN.

I have signed the Report by the Central Advisory Board of Education based on the excellent memorandum prepared by Mr. John Sargent, with certain reservations.

The first point I wish to refer to is contained in the last paragraph of item 3 of the Introduction. "A word of warning based on experience elsewhere is necessary against any proposal on economic grounds to apply compulsion only for basic primary stage, in the first instance, and then to extend it gradually upwards as circumstances allow and finances permit . . . . . . If, as would appear to be the case, a universal compulsory system of basic education can only be introduced by stages, the progression should clearly be from area and not from age to age."

Emphasis has been laid more on the duration of the course of education than on the standard of attainments to be aimed at. Experience of other countries may not help us, because, so far, they have all followed the old method of educating children based on books and black-boards—a very slow process for the present age. It may be safely claimed that if aids to education which Science has placed in the hands of man, are *fully* utilised, the Progress of attainment of a child (or adult) can be hastened enormously. I refer to the use of magic lantern, epidiascope, cinematograph, gramophone, radio, etc., etc. It may be claimed with full justification that the knowledge which it would take a child weeks to acquire under the existing methods he could acquire with the help of a cinematograph in a much shorter time and with very much less strain on the teacher. As an illustration one may take such a complicated physiological process as digestion of food in man. A cinematograph could teach this process perhaps in half an hour better than it would take a good teacher weeks to teach. It is suggested that if such aids to education are fully utilised, the time required to acquire the amount of knowledge which it is necessary for a boy to possess to be able to look after himself and to make a useful citizen can be greatly reduced.

Similarly mental and intellectual development, which to a large extent goes hand in hand with acquisition of knowledge, will be a rapid process, if science is applied for that purpose also. It is suggested that experiments should be set on foot immediately to test the value of the above-mentioned aids to education.

I admit that the time factor has another aspect also. Supposing a child can be made to reach the same standard of educational attainments in 5 years as is aimed at in a 8 years course, then what would be the occupation of the child when he leaves his school at the tender age of 11? It is maintained that for the health and proper development of such a child it is necessary that he should not be permitted to take up any occupation which is beyond his physical or mental capacity, or is physiologically or psychologically harmful to him. Here again science will come to the aid of man and it should be possible, in a country like India, where industry has not developed and, therefore, has not become stereotyped, to plan in such a manner as to take this aspect of human life into consideration. Child labour could be employed for suitable agricultural occupation and for such industries as manufacture of radio sets, cine-projectors, sewing machines, clocks, etc., etc., *i.e.*, such occupation where physical strength is not needed. In a scheme of national education there will be demand for gramophones, radio sets, etc., etc.

Area to area development will, I am afraid, have serious consequences. If in a province a certain consolidated area is taken, then the people of this area will get an advance of perhaps quarter of a century over the people of certain other areas. Because of their better education they will usurp all power in administration and industry. This will bring about serious social conflicts. Even if the unit from area to area development is a village out of a group of seven adjoining villages then the same consequences will result. We have experience of the result of such development as schools and colleges were located in urban areas and the city people took advantage and received education and attained power. We have for this reason a clash of urban and rural interests in administration, industry, etc., etc. One limb of the tree will become too large. This must be avoided. Therefore, the progress should be from age to age and compulsory education must start all over simultaneously. It may be that the number of teachers required for simultaneous compulsory education may not be available. I am dealing with this matter later.

There is yet another aspect of the question. It is intended to plant into this country, in a full grown condition, a system of education which has developed gradually in a country like England. England to-day is a highly industrialised country and education prepares people for life in an industrial country. Advancement of education from stage to stage kept pace with the advancement of industries from stage to stage. India is essentially an agricultural country and is likely to remain so. Education in this country has been criticised because it is not in keeping with the requirements of the community. It is criticised because there are too many "highly educated people" for employment and many graduates take up work which should be done by matriculates and so on. Let us picture to ourselves the condition in our village to-day. It will take us very many years before we can eliminate drudgery from our farming and no one who can escape this drudgery will continue to follow this profession. If we take up the children of such a village from almost complete illiteracy and educate them by the best of means at our disposal for 8 years, will we not produce an extreme form of social revolution ? Therefore it is desirable that advance in education keeps pace with the general improvement in agriculture, industries, public health, etc., etc. ; it may even be in the vanguard, but it should not go too far ahead because the chain might snap. Gradualness, if it is a virtue anywhere, is a virtue in the educational field. For a rural population gradualness should be the watchword in educational development. Stage to stage progress has advantages.

About the end in paragraph 9 of the Introduction the report refers to the formidable nature of the financial implication of the scheme. There is a general scepticism regarding the funds being available, and some feel that the ship of educational development may strike against the rock of financial implications and founder. It is, therefore, suggested that if financial implications are too formidable, the educated people of the country be conscripted for the purpose of educational development. Every Matriculate before he is admitted to a University Course must undertake some teaching work. Every Matriculate or Graduate who seeks employment must have done at least two years teaching work. That at once raises the question of the training of teachers. Here one may frankly state that some sacrifice in quality may be essential for the sake of quantity. Those who cannot get cakes must live on bread. Moreover, I would like to repeat that if aid of scientific implements is available, perhaps the duration of teachers' training course could be reduced and efficient teachers could be produced in a much shorter time than we do at present. For those who may doubt this it is suggested that an experiment may be set on foot immediately where two sets of teachers be trained—one with the fullest use of such apparatus as magic lantern, cinematograph, gramophone, etc., and the other according to the existing system.

Regarding Nursery Schools my opinion is that such education should not be free but should be paid for, at any rate, till such time that a fair number of the population are able to take advantage of it. It will be perhaps after several decades that pre-nursery education would be possible in rural areas in India.

Regarding University education I hope it will be made absolutely clear that the University Grants Committee will be a co-ordinating agency which will advise and guide but will not control Universities.

I do not agree that the present Intermediate course has no place in University education. Properly planned it can be a most useful course of study. Such a planned course exists on the science side for Medical and Engineering degrees. Similarly there should be a course preparatory for the degree courses in a University. Transference of a year to the school will, I am certain, lower the standard and not raise it. Further, when the medium of instruction in the High Schools has been changed into the mother tongue, the standard of English is bound to go down at the matriculation stage and if English remains the medium of instruction for the degree courses, difficulties will arise. A preparatory course for the University will become a greater necessity. In an Intermediate course English will receive greater attention and subjects which are pre-requisite for the degree courses will be studied. The Headmasters of Public Schools have drawn attention to the position of English as medium of instruction and have laid emphasis on this point.

At present the Universities deal with Governments through their Department of Public Instruction. It is suggested that the Universities should deal with Governments through their Chancellors.

Regarding the age of compulsion I adhere to the Inter-Universities Board resolution, *i.e.*, age five to thirteen.

CHAPTER V.—TECHNICAL, COMMERCIAL AND ART EDUCATION

Item 20 of the main conclusion.—It is suggested that the administration of all technical education should be under the Education Department. The intention, however, is that all technical education, the standard of which is comparable to a high school standard, be under the Education Department. To this there is no objection, but technical education beyond that standard should be either under the University or under the control of the Department concerned, for instance, medical education under the medical department, agricultural education under the agriculture department, forest education under the forest department and so on. This is necessary because education and research go hand in hand in all technical and professional institutions and research is canalised for the departmental needs.

CHAPTER VII

Fullest use should be made, after the War, of the centres established for the training of officers, for the training of teachers. Moreover *ex*-soldiers should be encouraged, on return to civil life, to take up the teaching profession. The training received in the Army, the experience which such men have gained would enable them to take up teaching work very efficiently after a very short training.

Educational Museums.—There is one aspect of education which has been completely ignored in this report and that is the development of educational museums. Both as a means of educating the young and as a means of educating the adult, museums are a force with tremendous possibilities. Teaching museums and particularly science museums must be developed extensively. Science museums are comparatively recent developments in Europe and America but their utility and efficiency as a means of public instruction has already been proved. No scheme of education can be complete without paying attention to this aspect of this question.

(Sd.) M. AFZAL HUSAIN.

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‡ NOTE BY SIR MIRZA MOHAMMAD ISMAIL.

I would like to enter the following note:

It is essential that the autonomy of the universities should be maintained, and the functions of the Central Grants Committee, if created, should not exceed the limits set in Resolution 7 of the Inter-University Board, December, 1943. (Cf. Page 103).

(Sd.) MIRZA M. ISMAIL.

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§ NOTE BY THE HON'BLE MR. TAMIZUDDIN KHAN AND THE HON'BLE KHAN BAHADUR SAYIDUR RAHMAN.

It will, we think, be universally acknowledged that the Report of the Central Advisory Board of Education on Post-War Educational Development, the main credit for which is due to Mr. Sargent, the Educational Adviser to the Government of India, is worth its weight in gold. No previous endeavour of a similar character can approach it in insight and boldness of conception. It will, we hope, prove to be an epoch-making document. The proposals may appear to be Utopian to people devoid of imagination, but we are convinced that nothing short of a superhuman effort as envisaged in the Report will break the educational-*cum*-economic vicious circle in which we have hitherto been blindly moving and place our country on its way to an era of progress and development in conformity with the other civilized countries of the world. We are in general agreement with the views expressed in the Report and have no hesitation in subscribing to its subject, however, to the following dissenting observation:

Post-war development in India, whether in education or industry, will depend largely on her political status and the character of the constitution that may be eventually set up. The latter will in their turn as far as one can see, depend upon the attitudes of the peoples of this country and of the British nation. The latest attitude of the British Government in so far as it has found expression in the Cripps proposals clearly indicates the possibility of the country being divided into several independent Dominions or States. If we keep this main background in view, it should be understood that the control of certain branches of educational activities spoken of in the Report must mean control either by one central authority or by several central authorities, as the case may be, in their respective spheres of jurisdiction. Be that as it may, we are not in favour of the centralization proposed which, we think, will be a retrograde step. The immensity of the size of this country, which is as large as the whole of Europe minus Russia and the racial, linguistic and cultural differences in the vast mass of its population comprising one-fifth of the entire human race, must rule out such proposals for centralisation based on the analogy of what may obtain in England or other European countries. Furthermore, irrespective of whether the country is politically partitioned or not, its future constitution must be, to appearances, of a federal character and the units constituting the Federation or Federations, *viz.*, the provinces must be, in themselves, fully autonomous States. Proposals calculated to detract from the autonomy of the Constituent States such as the establishment of controlling central authorities cannot therefore be acceptable. The argument in favour of a central control on the score of the Centre bearing the bulk of the financial burden is plausible but not convincing. The plain fact that on the strength of an argument like this central control even of Primary Education can be advocated equally strongly, shows its futility. All such arguments arise out of a confused vision of the future political status and constitution of the country. Under the expected regime the Constituent States of the Federation or Federations must enjoy not only political but also fiscal autonomy. In order that they may efficiently function as autonomous states, their revenue producing capacity will have to be adequately enhanced and many of the sources of taxation out of which the Centre or Centres can expect to raise the money necessary to meet the heavy expenditure involved in the scheme contemplated in the Report as well as in the many other schemes of post-war reconstruction now under preparation, will have to be allocated to the Provincial Governments. Whatever additional financial assistance may still be necessary to implement this sceme should be given by the Centre in a spirit of friendly helpfulness and not for the purpose of control. In our view such help should best be given by way of subvention to the Provincial Governments and not as direct grants-in-aid to the institutions concerned. We do not mean, however, that there is no room whatsoever for the setting up of Central educational bodies. Such bodies established for the purpose of co-ordination, maintenance of uniform and adequate standards and prevention of overlapping will be useful. But they can and should be advisory in character.

There is one other aspect of the Report over which we do not feel happy. Another half a century to elapse before the scheme can come into full operation is a dismal contemplation. The busy world is not going to wait for us. We must keep pace with the rest of progressive humanity or lag for ever behind. The speed of progress envisaged in the Report must at least be doubled if not quadrupled no matter even if we have to resort to means and methods, as Russia did on emancipation from the Czarist regime.

(Sd.) TAMIZUDDIN KHAN.

(Sd.) SAYIDUR RAHMAN.

†NOTE BY THE HON'BLE PIR ILLAHI BAKHSH NAWAZALI

I agree with my Honourable friend the Minister of Bengal that education should not be a central subject and that the time for the scheme be reduced.

(Sd.) PIR ILLAHI.

||NOTE BY MR. M. RUTHNASWAMY

While cordially welcoming the " Grand Design " of the Report by the Central Advisory Board of Education on Post-War Educational Development in India, I regret I must enter a few *caveats*.

1. In the historical introduction to the several chapters justice should have been shown to the work done in the past. In the Introduction on page 5 of the Report, the phrase "in a country where apathy and inertia have reigned so long" hardly does justice to the honoured name and efforts of Mr. Gokhale, 40 years ago to rouse the country and the Government to the need for compulsory primary education or to the 40 years old scheme of compulsory education in the Baroda State or to the statutes enabling compulsory primary education to be introduced in many parts of the country passed by popular Ministries under the Montagu-Chelmsford Reforms. And in the

chapter on University Education (page 26 of the Report) only the Delhi University gets honourable mention by name.

2. The problem of religious education does not get the attention it deserves, although the importance of religious education is acknowledged. A whole chapter should have been devoted to a discussion of the ways and methods by which it may be incorporated in the educational system of the country—especially of the difficulties by which it is surrounded. I am glad that a Committee of the Central Advisory Board has been formed to deal with this question. May I recommend to the Committee the consideration of the Scottish system of provision for religious education in schools, which reconciles the freedom of denominational schools with the needs of the State?

3. In regard to Pre-Primary Education I am afraid the State would take too much on itself if it is going to provide for this kind of education also—too much for the efficiency of the educational system and too much for the freedom of the family and the individual. The ominous example of Russia is quoted. This taking up by the State of the making of the child from the age of 2 or 3 years leaves little room for education by home and by the mother. Provision is to be made against mothers being at work away from their homes. I am hoping and praying that this evil of western industrialism—mothers at work in factories—will not be reproduced in India. Nothing, not even the brightest and most up-to-date nursery school, can be a substitute for the influence of the mother, even an illiterate mother, in regard to the earliest education of the child. Education in the traditional and social ideas and emotions of the people can be done only through the mother. We want to breed human beings not State-cells. And the prospect of a thorough State-bred population is appalling.

4. In regard to the application of the selective principle for the selection of pupils for higher education, care should be taken that it is not worked to the detriment of the supply of higher education to members of the backward communities. Provision should be made for vocational guidance in every school.

5. As regards University education, I am not in favour of the three years' course for the ordinary B.A. degree examination. The comparatively low age (16 years) at which students are allowed to enter Indian Universities, the different character and methods of instruction imparted at the school and the University, the difference in the life lived by students at school and the University require that the Indian student should spend 4 and not 3 years at a University. The experiment at Delhi University may be watched. The lesson of the Mysore University, which tried the 3-year period and has now gone back to the 4-year period, may make University reformers pause before they accept the 3 years' period as a sound one for Indian Universities.

6. The financing of the scheme and the consequent control by the Government of India may raise doubts and fears in the minds of those that are concerned with the constitutional progress of the country. Education is a field primarily requiring experiment, and provincial variations will add to the richness of Indian education. If there is to be subvention by a wealthy Central Government, which can afford to finance education, besides essential central services like defence and foreign affairs, it can be done only with due regard to Provincial autonomy, which may become in the future even more extensive than it is now.

Subject to these observations, I subscribe to the Report as being a planned attempt at the solution of India's educational problem.

(Sd.) M. RUTHNASWAMY.

¶NOTE BY SIR MEVEREL STATHAM

(1) I consider the report defective in so far as it does not deal at all with the Indian Soldiers returning in very large numbers to their country after the war or with the education of their children and dependants. It has been suggested that this is a purely educational report and that that is why the problem of returned soldiers has been left out, but, in my opinion, the training of the returned soldiers and their replacement in civil life, in addition to educational concessions and probably special provision needed for their children and dependants, will be of primary importance for many years to come.

(2) The report suggests that during a long term policy of carrying out the full recommendation of the report, and spending ultimately in 40 or 50 years a total sum of Rs. 312 crores, in the first 10 years not more than about 20 crores should be raised and spent. I am entirely against this method of approach to the financial aspects of the proposals in the report. If anything constructive is really going to be done, the proposal should be taken up seriously and immediately after the war comes to a close. I consider that, both from the point of view of expediency and of finance, it would be very much better to raise a lesser sum than Rs. 312 crores immediately after the war and get to work in carrying out the main recommendations of the report immediately. Any suggestions both in regard to expenditure and policy which may take effect only 40 or 50 years hence are in grave danger of being put on one side and neglected. The ultimate huge figure of expenditure, *viz.*, Rs. 312 crores may in itself result in an undesirable postponement of action. This figure can comparatively easily be reduced to a figure which could be raised almost immediately after the war without immense difficulty and more particularly without in any way damaging the main objectives of the report. Two main examples of this can be given immediately, while obviously there are other examples which could be quoted. The estimate of cost ultimately to be spent on attempting to make illiterate adults literate is Rs. 41.63 crores, an expenditure which, in my opinion, if all boys and girls are going to be brought under compulsion for 8 years, is entirely unnecessary. The estimated expenditure on what the report calls "pre-primary education" is Rs. 3.18 crores. Again, in my opinion, an entirely unnecessary expenditure. That there should be and must be a limited number of Nursery Schools I do not deny; but I am entirely against several millions of children, at the age of 3, being taken away from the care of their mothers and am firmly convinced that the majority of Indian opinion is behind me. Crechès for working mothers are necessary but this does not arise out of the chapter in the report on Pre-Primary education.

(3) The question of the method of selecting students who will pass from the basic schools to the secondary schools and be given opportunities to proceed to Universities and who will eventually enter the higher grades of Government service and the learned professions has been most inadequately dealt with and the methods suggested so far in the report represent a very grave danger to students of minority communities, backward communities and groups which, for whatever reason mentally, though not in any way defective, develop late. In my opinion, any educational post-war re-construction scheme must give, subject of course to a minimum fitness, an equal opportunity for all rich and poor, those from the rural areas as well as those from the urban areas and those from backward communities as well as from forward communities.

(4) Generally speaking, the education of girls and women is disposed of in one paragraph in the introduction to the report and it has been assumed that in the future boys and girls will receive equal and similar treatment. In my opinion, for many decades to come, the education of girls will, in a sense, still have to be treated as a special problem and the questions of separate schools, separate curriculum, the provision of women teachers, co-

education and religious instruction, for example, will for a long time require the special attention of all educationists in India.

(5) I am not satisfied with the half paragraph in the report devoted to the question of religious instruction. There are few communities in India which do not regard religious instruction, and, if possible, religious instruction given during school hours, as a pre-essential of secular education and there are some communities, such as the Muslim and Roman Catholic communities, which will not receive secular education without religious education. No plan for the future can afford to neglect these facts or refuse to face these issues clearly.

(6) In one half paragraph the report deals with the question of communal and caste divisions in India. Briefly in my opinion, there are still communities and sections of communities which cannot and will not be educated, even under a compulsory system, unless special provision continues to be made for them for many years to come. To ignore communal difficulties and to plan upon purely idealistic lines will not solve India's future educational problems. In my opinion, the difficulties of special communities, minority communities and backward communities should be stated and squarely faced. These difficulties should be realised and plans should be made to overcome them, until in the distant future no differences between communities, in so far as education is concerned, remain.

(7) I am whole-heartedly in favour of compulsion for all; but the report signally fails to deal with the machinery for effective compulsion. Compulsion has existed for many years in many areas in India, but on the whole it has been a failure because it has not been enforced. In the Province of Madras, for example, there are many compulsory areas in which attendance, enrolement and progress have been noticeably less satisfactory than in non-compulsory areas. A plan for Universal compulsory education in India must at the very outset indicate clearly a strong, and possibly governmental machinery, for seeing that compulsion is actually effective.

(8) There are many indications in the report that Provincial autonomy, in the sphere of education, is going to be interferred with at the several stages of education. However beneficial, financial and otherwise, control from the centre may be, I do not agree to going back on the constitutional advancement already made in India and interfering in any way with Provincial autonomy.

(Sd.) R. M. STATHAM.

[*Cf. Sir Mirza Ismail's note on page* 99.—Resolution No. 7 of the Inter-University Board reads—"If, under the scheme of educational development, the Central Government undertakes to make grants to Universities, a Central Grants Committee might be appointed and its functions will be:

(1) To assess and distribute grants from public funds to the Universities;

(2) To examine and advise upon all schemes for major developments;

(3) To visit the Universities once in five years and make recommendations, if any, to them.

It should consist of men of academic eminence and experience of University administration in India and will work, where necessary, through provincial and regional sub-committees, but any kind of control or inspection is not consistent with the dignity and autonomy of the Universities, while the advice and co-operation of the Central Grants Committee will always be welcomed by the Universities."].

APPENDIX

TABLE A

Estimate of Recurring Cost—Junior Basic (Primary) Schools

(When the scheme is in full operation)

Province	No. of pupils between 6—II years			No. of teachers required		
	In rural areas	In urban areas	Total	In rural areas	In urban areas	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Assam	11,07,000	32,000	11,39,000	36,900	1,067	37,967
Bengal	63,02,000	6,92,000	69,94,000	2,10,067	23,067	2,33,134
Bihar	45,07,000	2,57,000	47,64.000	1,50,233	8,567	1,58,800
Bombay	18,77,000	6,60,000	25,87,000	62,567	22,000	84,567,
C. P. & Berar	18,29,000	2,59,000	20,88,000	60,967	8,633	69,600
Madras	52.02 000	9.84.000	61,86,000	1,73,400	32,800	2,06.200
N.-W. F. P.	2,87,000	64,000	3,51,000	9,567	2,133	11,700
Orissa	8,06,000	31,000	8,37,000	26,867	1,033	27,900
Punjab	30,66,000	5,54,000	36,20,000	1,02,200	18,467	1,20,667
Sind	4,40,000	1,08,000	5,48,000	14,666	3,600	18,266
U. P.	58,07,000	8,30,000	66,37,000	1,93,567	27,666	2,21,233
Ajmer-Merwara	46,000	27,000	73,000	1,533	900	2,433
Baluchistan	6,000	2,000	8,000	200	67	267
Coorg	17,000	2,000	19,000	566	67	633
Delhi	21,000	64,000	85,000	700	2,133	2,833
British India	3,13,20,000	45,66,000	3,58,86.000	10,44,000	1,52,200	11,96,200
Indian States and Agencies	86,86,000	12,98,000	99.84,000	2.89,533	43,267	3,32,800

Province	Teachers' salary and allowances			Other expenditure		
	In rural areas	In urban areas	Total	In rural areas	In urban areas	Total
	(8)	(9)	(10)	(11)	(12)	(13)
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Assam	2,40,64,796	8,35,528	2,49,00,324	1,03,13,484	3,58,083	1,06,71,567
Bengal	13,69,97,820	1,80,62,903	15,50,60,723	5,87,13,351	77,41,244	6,64,54,595
Bihar	9,79.76,329	67,08,496	10,46,84,825	4,19,89,855	28,75,070	4,48,64,925
Bombay	4.08,03,851	1,72,27,375	5,80,31,226	1,74,87,365	73,83,161	2,48,70,526
C. P. & Berar	3,97,60.391	67,60,178	4,65,20,569	1,70.40,168	28.97,219	1,99,37,387
Madras	11,30.84,977	2,56,84,450	13,87,69.427	4,84,64,990	1,10,07,622	5,94,72,612
N. W. F. P.	62,39,239	16,70,272	79,09,511	26,73,960	7,15,831	33,89,791
Orissa	1,75,21,650	8,08,903,	1,83,3,0553	75,09,278	3,46,673	78,55,951
Punjab	6,66,51,008	1,44,60,815	8,11,11,823	2,85,64,718	61,97,492	3,47,62,210
Sind	95,64,615	28,19,025	1,23,83,640	40'99,121	12,08,153	53,07,274
U. P.	12,62,37,139	2,16.64,207	14,79,01,346	5,41,01,631	92,84,660	6,33,86,291
Ajmer Merwara	9,99,765	7,04,756	17,04,521	4,28,471	3,02,038	7,30,509
Baluchistan	1,30,432	52.465	1,82,897	55,899	22;485	78,384
Coorg	3,69.124	52,465	4,21,589	1,58,196	22,485	1,80,681
Delhi	4,56,514	16,70,272	21,26.786	1,95,649	7,15,831	9,11,480
British India	68,08,57,650	11,91,82,110	8,000,39,760	29,17.96,136	5,10,78,047	34,28,74,183
Indian States and Agencies.	18,88,22,565	3,38,80,765	22,27,03,330	8,09,23,956	1,45,20,328	9,54,44,284

Province	Gross total cost per annum		
	In rural areas (14) Rs.	In urban araas (15) Rs.	Total (16) Rs.
Assam	3,43,78,280	11,93,611	3,55,71,891
Bengal	19,57,11,171	2.58,04,147	22,15,15,318
Bihar	13,99,66,184	95,83.566	14,95,49,750
Bombay	5,82,91,216	2,46,10,536	8,29,01,752
C. B. & Berar	5,68,00,559	96,57,397	6,64,57,956
Madras	16,15,49,967	3,66,92,072	19,82,42,039
N.-W F. P, ...	89,13,199	23,86,103	1,12,99,302
Orissa	2,50,30,928	11,55,576	2,61,86,504
Punjab	9,52,15,726	2,06,58,307	11,58,74,033
Sind	1,36,63,736	40,27,178	1,76,90,914
U. P.	18,03,38,770	3.09,48,867	21,12,87,637
Ajmer-Merwara	14,28,236	10,06,794	24,35,030
Baluchistan	1,86,331	74,950	2,61.281
Coorg	5,27,320	74,950	6 02,270
Delhi	6,52.163	23.86,103	30.38,266
British India	97,26,53,786	17,02,60,157	1,14,29,13,943
Indian States and Agencies	26,97,46,521	4,84,01,093	31,81,47,614

NOTES

(*a*) The population figures (excepting those for Baluchistan and Indian States) are based on the Public Health Commissioner's Report for 1940.

(*b*) The population figures for Baluchistan and Indian States are based on the 1931 Census. The figures for Baluchistan are liable to wide variation in view of the fact that over 80 % population of Baluchistan was returned "Age unspecified".

(*c*) For the approximate population in the age-group 6—11, the total of 4/5 of the age-group 5—10 and 1/5 of the age-group 10—15 has been taken : or 12·7 per cent. approximately of the total population.

(d) The distribution of children between rural and urban areas is according to the ratios given in the Census Tables for 1941 (roughly 7 : 1).

(*e*) One teacher to every 30 pupils assumed.

(*f*) Salary and allowances of teachers in rural areas assumed :—

Average (Government method of calculation) of the minimum national scale for teachers in Primary Schools

[Rs. 30—1—35—3 (biennially)—50 p.m.] recommended in the report of the Teachers Committee of the Central Advisory Board of Education in India *i.e.*, Rs. 42·5 p.m.; *plus* 6¼per cent. Contributory Provident Fund *plus* 10 per cent. house rent allowance recommended by the same Committee for teachers in rural areas.

(*g*) Salary and allowances of teachers in urban areas assumed :—

Same scale as for the teachers of rural areas *plus* 6¼ per cent. Contributory Provident Fund *plus* 33⅓ per cent. urban area allowance according to the recommendation of the Teachers Committee.

(*h*) 10 per cent. of the total expenditure on salaries and allowances has been provided for extra remuneration for Head Teachers, Responsible Teachers and Relief Hands.

(*i*) Total salary bill has been assumed to account for 70 per cent. of the total gross cost.

(*j*) Other expenditure which includes expenditure on loan charges, special services including school medical service, furniture, equipments, etc., has been taken to account for 30 per cent. of the total gross cost.

(*k*) Cost *per capita* on the basis of the above calculation=Rs. 31·84 per annum.

TABLE B

Estimate of Recurring Cost—Senior Basic (Middle) Schools

(When the scheme is in full operation)

Province	No of pupils available			No. of teachars required		
	In rural areas	In urban areas	Total	In rural areas	In urban areas	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Assam	4,63,000	13,000	4,76,000	18,520	520	19,040
Bengal	27,21,000	2,99,000	30,20,000	1,08,840	11,960	1,20,800
Bihar	18,88,000	1,08,000	19,96,000	75,520	4,320	79,840
Bombay	8,20,000	2,88,000	11,08,000	32,800	11,520	44,320
C. P. and Berar ...	8,04,000	1,13,000	9,17,000	32.160	4,520	36,680
Madras -	23.04,000	4,36,000	27,40,000	92,160	17,440	1,09,600
N.-W. F. P. ...	1,22,000	28,000	1,50.000	4,880	1.120	6,000
Crissa	3,67,000	14,000	3,81,000	14.680	560	15,240
Punjab	13,60,000	2,45 000	16.05,000	54.400	9.800	64,200
Sind	1,81,000	44.000	2,25,000	7,240	1,760	9,000
U. P.	25,68,000	3,67,000	29,35,000	1'02,720	14,680	1,17,400
Ajmer-Merwara ...	21,000	12,000	33,000	840	480	1,320
Baluchistan	3,000	1.000	4.000	120	40	160
Coorg	8,000	1,000	9,000	320	40	360
Delhi	10,000	30,000	40,000	400	1,200	1,600
British India	136,40,000	19,99,000	1,56,39,000	5,45,600	79,960	6,25,560
Indian State and Agencies ...	38,60,000	5,77,000	44,37,000	1,54,400	23.080	1,77,480

Province	Teachers' salary and allowances			Other expenditure		
	In rural areas	In uran areas	Totaf	In rural areas	In urban ares	Total
	(8) Rs.	(9) Rs.	(10) Rs.	(11) Rs.	(12) Rs.	(13) Rs.
Assam ...	1,74,77,648	5,89,232	1,80,66,880	74,90,421	2,52,528	77,42,949
Bengal ...	10,27,14,213	1,35,52,325	11,62,66,538	4,40,20,377	58,08,139	4,98,28,516
Bihar ...	7,12,69,545	48,95,154	7,61,64,699	3,05,44,091	20,97,923	3,26,42 014
Bombay ...	3,09,53,934	1,30,53,744	4,40,07,678	1,32,65,972	55,94,462	1,88,60,434
C. P. & Berar ...	3,03,49.955	51,21,782	3,54,71,737	1,30,07,124	21,95,049	1,52,02,173
Madras ...	8,69,73,005	1,97,61,918	10,67,34,923	3,72,74,145	84,69,393	4,57,43,538
N.W.F.P. ...	46,05,341	12,69,114	58,74,455	19,73,718	5,43,906	25,17,624
Orissa ...	1,38,53,773	6,34,557	1,44,88,330	59,37,331	2,71,953	62,09,284
Punjab ...	5,13,38,232	1,11,04,748	6,24,42,980	2,20,02,099	47,59,178	2,67,61,277
Sind ...	68,32,515	19,94,322	88,26,837	29,28,221	8,54,709	37,82,930
U. P. ...	9,69,38 661	1,66,34,459	11,35,73,120	4,15,45,140	71,29,054	4,86,74,194
Ajmer-Merwara...	7,92,723	5,43,906	13,36,629	3,39,738	2,33,103	5,72,841
Baluchistan ...	1,13,246	45,325	1,58,571	48,534	19,425	67,959
Coorg ...	3,01,990	45,325	3,47,315	1,29,424	19,425	1,48,849
Delhi ...	3,77,487	13,59,765	17,37,252	1,61,780	5,82,757	7,44,537
British India ...	51,48,92,268	9,06,05,676	60,54,97,944	22,06,68,115	3,88,31,004	25,94,99,119
Indian States and Agencies,	14,57,09,982	2,61,52,814	17,18,62,796	6,24,47,135	1,12,08,349	7,36,55,484

Province	Gross total cost per annum		
	In rural areas	In urban areas	Total
	(14) Rs	(15) Rs.	(16) Rs.
Assam	2,49,68,069	8,41,760	2,58,09,829
Bengal	14,67,34,590	1,93,60,464	16,60,95,054
Bihar	10,18,13,636	69,93,077	10,88,06,713
Bombay	4,42,19,906	1,86,48,206	6,28,68,112
C P. & Berar	4,33,57,079	73,16,831	5,06,73,910
Madras	12,42,47.150	2,82,31,311	15,24,78,461
N.-W. F. P.	65,79,059	18,13,020	83,92,079
Orissa	1,97,91,104	9,06,510	2,06,97,614
Punjab	7,33,40,331	1,58,63,926	8,92,04,257
Sind	97,60,736	28,49,031	1,26,09,767
U. P.	13,84,83,801	2,37,63,513	16,22,47,314
Ajmer-Merwara	11,32,461	7,77,009	19,09,470
Baluchistan	1,61,780	64,750	2,26,530
Coorg	4,31,414	64,750	4,96,164
Delhi	5,39,267	19,42,522	24,81,789
British India	73,55,60,383	12,94,36,680	86,49,97,063
Indian States and Agencies	20,81,57,117	3,73,61,163	24,55,18,280

NOTES

(*a*) The population figures (excepting those for Baluchistan and Indian State) are based on the Public Health Commissioner's Report for 1940.

(*b*) The population figures for Baluchistan and Indian States are based on the 1931 Census. The figures for Baluchistan are liable to wide variation in view of the fact that over 80 per cent. population of Baluchistan was returned "Age unspecified."

(*c*) The number of children available for Senior Basic (Middle) Schools has been assumed to form 4/5 of the age-group 11—14; (calculated as 4/5 of 3/5 of the age-group 10—15); or 4/5 of 6·9 per cent. approximately of the total population.

(*d*) The distribution of children between rural and urban areas is according to the ratios given in the Census Tables for 1941 (roughly 7 :1).

(*e*) One teacher to every 25 pupils assumed.

(*f*) Salary and allowances of teachers in rural areas assumed :—

Average (Government method of calculation) of the minimum scale for teachers in Vernacular Middle Schools (Rs. 40—2—80 p.m.) recommended in the report of the Teachers Committee of the Central Advisory Board of Education, *i.e.*, Rs. 61·5 p.m. plus 6¼ per cent. Contributory Provident Fund *plus* 10 per cent. house rent allowance recommended by the same Committee for teachers in rural areas.

(*g*) Salary and allowances of teachers in urban areas assumed :—

Same scale as for the teachers of rural areas *plus* 6¼ per cent. Contributory Provident Fund plus 33⅓ per cent. urban area allowance according to the recommendation of the Teachers Committee.

(*h*) 10 per cent. of the total expenditure on salaries and allowances has been provided for extra remuneration for Head Teachers, Responsible Teachers and Relief Hands.

(*i*) Total salary bill has been assumed to account for 70 per cent. of the total gross cost.

(*j*) Other expenditure which includes expenditure on loan charges, special services including school medical service, furniture, equipments, etc., has been taken to account for 30 per cent. of the total gross cost.

(*k*) Cost *per capita* on the basis of the above calculation=Rs. 55·31 per annum.

TABLE C

Estimate of Recurring Cost—High Schools

(When the scheme is in full operation)

	Estimated number of pupils to be accommodated in High Schools					
	Junior or Middle Stage			Senior Stage		
Province	Boys	Girls	Total	Boys	Girls	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Assam	62,814	56,233	1,19,047	51,005	52,176	1,03,181
Bengal	3,98,925	3,56,182	7,55,107	3,27,651	3,35,607	6,63,258
Bihar	2,64,375	2,34,645	4,99,020	2,04,340	1,98,749	4,03,089
Bombay	1,45.926	1,31,030	2,76,956	1,21,607	1,15,804	2,37,411
C. P. & Berar	1,17,470	1,11,765	2,29,235	98,429	99,816	1,98,245
Madras	3,52,021	3,33,067	6,85.088	2,87,550	2,92,205	5,79,755
N.-W. F. P.	21,441	15,959	37,400	17,062	13,702	30,764
Orissa	49,017	46,155	95,172	42,938	44,208	87,146
Punjab	2,19,518	1,81,833	4,01,351	1,85,239	1,54,101	3,39,340
Sind	33,006	23,226	56,232	27,842	20,874	48,716
U. P.	4,03,696	3,30,027	7,33,723	3,40,635	2,90,697	6,31,332
Ajmer-Merwara	4,481	3,740	8,221	4,061	3,483	7,544
Baluchistan	545	387	932	1,036	415	1,451
Coorg	1,200	1,088	2,288	1,130	970	2,100
Delhi	5,521	4,501	10,022	5,523	4,271	9,794
British India	20,79,956	18,29,838	39,09,794	17,16,048	16,27,078	33,43,126
Indian States and Agencies ...	5,88,345	5,20,926	11,09,271	4,90,993	4,58,791	9,49,784

Province	Estimated number of pupils to be accommodated in High Schools			Total No. of teachers required in High Schools	No. of non-graduate teachers	Salary and allowances of non-graduate teachers	No. of graduate teachers
	Total No. of pupils						
	Boys	Girls	Total				
	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						Rs.	
Assam ...	1,13,819	1,08,409	2,22,228	11,110	5,555	52,44,059	5,556
Bengal ...	7,26,576	6,91,789	14,18,365	70,918	35,459	3,34,74,182	35,459
Bihar ...	4,68,715	4,33,394	9,02,109	45,104	22,552	2,12,89,652	22,552
Bombay ...	2,67,533	2,46,834	5,14,367	25,718	12,859	1,21,39,217	12,859
C. P. & Berar ...	2,15,899	2,11,581	4,27,480	21,374	10,687	1,00,88,795	1,087
Madras ...	6,39,571	6,25,272	12,64,843	63,242	31,621	2,98,51,015	31,621
N.-W- F. P ...	38,503	29,661	68,164	3,408	1,704	16,08,619	1,704
Orissa ...	91,955	90,363	1,82,318	9,116	4,558	43,02,856	4,558
Punjab	4,04,757	3,35,934	7,40,691	37,034	18,517	1,74,80,511	18,517
Sind ...	60,848	44,100	1,04,948	5,248	2,624	24,77,122	2,624
U. P. ...	7,44,331	6,20,724	13,65,055	68,252	34,126	3,22,15,797	34,126
Ajmer-Merwara...	8,542	7,223	15,765	788	394	3,71,946	394
Baluchistan ...	1,581	802	2,383	118	59	55,697	59
Coorg ...	2,330	20 58	4,388	220	110	1,03,843	110
Delhi ...	11,044	8,772	19,816	990	495	4,67,292	495
British India ...	37,96,004	34,56,916	72,52,920	3,62,640	1,81,320	17,11,70,613	1,81,320
Indian States and Agencies.	10,79,338	9,79,717	20,59,055	1,02,952	51,476	4,85,94,631	51,476

Province	Salary and allowances of graduate teachers	Total salary and allowances of High School teachers	Estimated expenditure on Head Teachers (10 per cent of Col. 16)	Total of all salaries	Other expenditure	Total gross cost per annum
	(15)	(16)	(17)	(18)	(19)	(20)
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Assam ...	1,01,21,460	1,53,65,519	15,36,552	1,69,02,07	72,43,745	2,41,45,816
Bengal ...	6,46,07,893	9,80,82,075	98,08,208	10,78,90,283	4,62,38,693	15,41,28,976
Bihar ...	4,10,90,759	6,23,80,411	62,38,041	6,86,18,452	2,94,07,908	9,80,26,360
Bombay ...	2,34,29,677	3,55,68,894	35,56,889	3,91,25,783	1,67,68,193	5,58,93,976
C. P. & Berar ...	1,94,72,195	2.95,60.990	29,56,099	3,25,17,089	1,39,35,895	4,64,52,984
Madras ...	5,76,14,885	8,74,65,900	87,46,590	9,62,12,490	4,12,33,924	13,74,46,414
N.-W.F. P. ...	31,04,765	47,13,384	4,71,338	51,84,722	22,22,024	74,06,746
Orissa ...	83,04,881	1,26,07,747	12,60,775	1,38,68,522	59,43,652	1,98,12,174
Punjab ...	3,37,38,807	5,12,19,318	51,21,932	5,63,41,250	2,41,46,250	8,04,87,500
Sind ...	47,81,046	72,58,168	7,25,817	79,83,985	34,21,708	1,14,05,693
U. P. ...	6,21,79,108	9,43,94,905	94,39,490	10,38,34,395	4,45,00,455	14,83,34,850
Ajmer-Merwara...	7,17,886	10,89,832	1,08,983	11,98,815	5,13,778	17,12,593
Baluchistan ...	1,07,500	1,63,197	16,320	1,79,517	76,936	2,56,453
Coorg ...	2,00,425	3,04,268	30,427	3,34,695	1,43,440	4,78,135
Delhi ...	9,01,912	13,69,204	1,36,920	15,06,124	6,45,482	21,51,606
British India ...	33,03,73,199	50,15,43,812	5,01,54,381	55,16,98,193	23,64,42,083	78,81,40,276
Indian States and Agencies.	9,37,91,588	1,23,86,219	1,42,38,622	15,66,24,841	6,71,24,932	22,37,49,773

NOTES

(*a*) The population figures (excepting those for Baluchistan and Indian States) are based on the Public Health Commissioner's Report for 1940.

(*b*) The population figures for Baluchistan and Indian States are based on the 1931 Census. The figures for Baluchistan are liable to wide variation in view of the fact that over 80 per cent. population of Baluchistan was returned "Age unspecified."

(*c*) No. of pupils at the Middle Stage of the High Schools has been assumed to form 1/5th of the age-group 11—14 (calculated as 1/5 of 3/5 of the age-group 10—15) : or 1/5 of 6·9 per cent approximately of the total population.

(*d*) No. of pupils at the Senior Stage has been assumed to form 1/5th of the age-group 14—17 [calculated as 1/5 of 1/5 (10—15 age-group)+2/5 (15—20 age-group)] : or 1/5 of 5·9 per cent. approximately of the total population.

(e) One teacher to every 20 pupils assumed; half the total no. of teachers assumed in the Middle Stage and the other half in the Senior Stage.

(f) Salary and allowances of the teachers in the Middle Stage assumed :—

Average (Government method of calculation) of the scale Rs. 40—2—80 p.m. (as recommended in the Teachers Committee Report of the Central Advisory Board of Education in India), *i.e.*, Rs. 61·5 per month; *plus* 6¼ per cent. Contributory Provident Fund plus 33 1/3 per cent. urban area allowance for half the number of teachers *plus* 10 per cent. house rent allowance for half the number in rural areas.

(g) Salary and allowances of the teachers in the Senior Stage assumed :—

Average (Government method of calculation) of the scale Rs. 70—5—150 p.m. (*cf.* Teachers Committee Report), *i.e.*, Rs. 118·7 p.m. with the same proviso as in the case of the teachers in the Middle Stage of the High Schools.

(h) 10 per cent. of the total expenditure on salaries and allowances in the High Schools has been provided for extra remuneration for Head Teachers and Responsible Teachers.

(i) Total salary bill has been assumed to form 70 per cent. of the total gross cost.

(j) Other expenditure which includes expenditure on loan charges, special services including school medical service, furniture, etc., has been taken to account for 30 per cent. of the total gross cost.

(k) Cost *per capital* on the basis of the above calculation = Rs. 108·66 per annum.

TABLE D

Enrolment in Universities in India

1941-42

University	*No. of students in the Intermediate Classes			No. of under-graduates				No. of Post-graduates			
				In Arts		In Science		In Arts		In Science	
	Men	Women	Total	M.	W.	M.	W.	M.	W.	M.	W.
All Universities in British India.	77,313	7,759	85,072	28,950	4,022	10,039	731	5,437	648	1,266	81
Universities in Indian States.	7,654	917	8,571	1,226	133	1,178	172	76	14	55	2
Total	84,967	8,676	93,643	30,176	4,155	11,217	903	5,513	662	1,321	83

University	No. of Research students				No. of students reading for Professional degrees in					
	In Arts		In Science		Medicine		Law		Engineering	
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.
All Universities in British India.	305	31	152	12	5,788	743	7,438	117	2,277	1
Universities in Indian States,	22	...	19	1	305	35	305	6	441	...
Total	327	31	171	13	6,093	778	7,743	123	2,718	1

University		No. of students reading for Professional degrees in						Total	
		Education		Agriculture		Commerce			
		M.	W.	M.	W.	M.	W.	M.	W.
All Universities in British India	...	1,957	821	1,194	...	6,294	32	1,48,410	14,998
Universities in Indian States	...	130	28	...	...	164	...	11,575	1,308
Total	...	2,087	849	1,194	...	6,458	32	1,59,985	16,306

Number of students in Intermediate classess in British India	...	...	...	85,072
Number of students in the degree classes of Universities in British India		...	...	78,336
		Total	...	1,63,408
Number of students in Intermediate Classes in the States	...	...	...	8,571
Number of students in the degree classes of Universities in the States		...	...	4,312
		Total	...	12,883
		GRAND TOTAL	...	1,76,291

*Includes students under the Boards of Intermediate Education.

TABLE E

Progress of Adult Education Programme

Year	No. of teachers likely to be available			Total No. of teachers to be engaged for literacy work	No of adults to be brought under instruction	Progressive total of adults made literate	Expenditure on literacy work (*e*) Rs.	Expenditure on Adult Education (*f*) Rs.	Total expenditure Rs.
	School teachers already in service (*a*)	New school teachers (*b*)	Non-professional teachers (*c*)						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1st	Period of preparation								
2nd									
3rd									
4th									
5th									
6th	1,50,000	10,000	20,000	1,80,000	45,00,000	45,00,000	2,07,00,000	20,70,000	2,27,70,000
7th	1,60,000	Do.	23,000	1,93,000	48,25,000	93,25,000	2,21,95,000	22,19,500	2,44,14.500
8th	1,70,000	Do.	26.000	2,06,000	51,50,000	1,44,75,000	2,36,90,000	23,69,000	2,60,59,000
9th	1,80,000	Do.	29,000	2,12,000	54,75,000	1,99.50,000	2,51,85,000	25,18,500	2,77,03,500
10th	1,90,000	Do.	32,000	2,32,000	58,000,00	2,57.50,000	2,66,80,000	26,68.000	2,93,48,000
11th	2,00,000	Do.	35.000	2.45.000	61,25,000	3,18,75,000	2,81,75,000	28,17,500	3,09,92,500
12th	2,10,000	Do.	38,000	2,58,000	64,50,000	3,83,25,000	2,96,70,000	29,6,7000	3,26,37,000
13th	Over 2,10.000	Do.	41,000	Do.	Do.	4,47,75,000	Do,	Do.	Do.
14th	Do.	Do.	44,000	Do.	Do.	5,12,25.000	Do.	Do.	Do.
15th	Do.	Do.	47,000	Do.	Do.	5,76,75,000	Do.	Do.	Do.
16th	Do.	Over 10,000	50,000	Do.	Do.	6,41,25,000	Do.	Do.	Do.
17th	Do.	Do.	Do.	Do.	Do.	7,05,75,000	Do.	Do.	Do.
18th	Do.	Do,	Do.	2,00,000	50,00'000	7,55,75,000	2,30,00,000	70,00,000	3,00,00,000
19th	Do.	Do.	Do.	1,60,000	40,00,000	7,95,75,000	1,84,00,000	1,16,00,000	Do.
20th	Do.	Do.	Do.	1,40,000	35,00,000	8,30,75,000	1,61,00,000	1,39,00,000	Do.
21st	Do.	Do.	Do.	1,00,000	25.00,000	8,55,75.000	1,15.00,000	1,85,00,000	Do.
22nd	Do.	Do.	Do.	80,000	20,00,000	8,75,75,000	92,00,000	2,08,00,000	Do.
23rd	Do.	Do.	Do,	60,000	15,00,000	8,90,75,000	69,00,000	2,31,00,000	Do.
24th	Do.	Do.	Do	40,000	10,00,000	9,00,75,000	46,00,000	2,54,00,000	Do.
25th	Do.	Do.	Do.	17,000	4,25,000	9,05,00,000(*d*)	19,55,000	2,80,45,000	Do.
						Total expenditure	41,63,00,000	18,08,09,500	59,71,09,500

NOTES

(*a*) In the sixth year this number is calculated approximately. There are at present 5,18,018 school teachers (1940-41 figures) of all types in British India. Of these a large number are either untrained or not possessed of adequate educational qualifications for the work. It is therefore estimated that there are in all likely to be about 1,50,000 who will be suitable and willing to take up the work. In the seventh and subsequent years the number is calculated by adding the previous year's figures of columns (2) and (3).

(*b*) This number is calculated at 50 per cent. of those newly trained in training institutions (*vide* Ch. VII).
All of these will have received some training in Adult Education work as part of their course, and it is only a question of how many of them will be willing to accept the work.

(*c*) It is hoped to train 20,000 non-professional teachers by the end of the fifth year and thereafter to increase the number every year by 3,000 upto a maximum of 50,000. Of these it is expected that a large number will ultimately be absorbed in Adult Education work as distinguished from literacy work.

(d) This leaves a balance of 3,65,00,000 but, as explained in Ch. VI, it will be fully covered by the number of adults who will either die or pass out of the age range and be too old for instruction before it is possible to provide for them.

(e) This is calculated at Rs. 4·6 per pupil per annum.

(f) This is calculated at 10 per cent. of the expenditure on literacy work up to the 17th year and thereafter at the balance of the permanent annual expenditure of Rs. 3 crores after meeting the expenditure on literacy work. From the twenty-sixth year the entire amount, Rs. 3 crores, will be available for Adult Education work proper.

TABLE F.

Recruitment of Teachers for the Expansion Scheme of Basic (Primary and Middle) Schools and of High Schools (Junior and Senior Departments)

Year	Total No. of non-graduate trained teachers (in hundreds)	No. of Pupils in Junior Basic (Primary) Schools (in thousands)					No. of teachers allotted to Junior Basic (Primary Schools in hundreds)	No. of Pupils in Senior Basic (Middle) Schools (in thousands)			No of teachers allotted to Senior Basic (Middle) Schools (in hundreds)
		Class I	Class II	Class III	Class IV	Class V		Class VI	Class VII	Class VIII	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1—5	Period of preparation.										
6	200	1,50	1,50	1,50	1,50	...	200	...	...	...	...
7	400	6,00	1,50	1,50	1,50	1,50	400	...	...	...	...
8	600	5,61	6,00	1,50	1,50	1,50	537	1,20	...	...	48
9	800	5,61	5,61	6,00	1,50	1,50	674	1,20	1,20	...	96
10	1,000	5,61	5,61	5,61	6,00	1,50	811	1,20	1,20	1,20	144
11	1,200	7,50	5,61.	5,61	5,61	6,00	1,011	1,20	1,20	1,20	144
12	1,400	6,50	7,50	5,61	5,61	5,61	1,022	4,80	1,20	1,20	288
13	1,600	6,33	6,33	7,50	5,61	5,61	1,049	4;49	4.80	1,20	420
14	1,800	6,43	6,43	6 33	7,50	5,61	1,077	4,49	4,49	4,80	551
15	2,000	12.10	6.43	6,43	6,33	7,50	1,293	4,49	4,49	4,49	539
16	2,300	14,12	12,10	6.43	6,43	6,33	1,514	6,00	4,49	4,49	599
17	2,600	14,42	14,12	12,10	6,43	6,43	1,784	5,06	6,00	4,49	622
18	2,900	14.40	14,42	14,12	12,10	6,43	2,049	5,14	5,06	6:49	648
19	3,200	16,78	14,40	14,42	14,12	12,10	2,394	5,14	5,14	5,06	614
20	3,800	22,83	16.78	14,40	14,42	14,12	2,751	9,68	5,14	5,14	799
21	4,374	21,65	22,83	16,78	14,40	14,42	3;003	11,30	9,68	5,14	1,045
22	4,948	21,57	21,65	22,83	16,78	14,40	3,241	11,54	11.30	9,68	1,301
23	5,522	28,72	21,57	21,65	22,83	16,78	3,719	11,52	11,54	11,30	1,374
24	6,222	34,43	28,72	21,57	21,65	22,83	4,307	13,42	11,52	11,54	1,459
25	6,844	30,90	34,43	28,72	21,57	21,65	4,576	18,26	13,42	11,52	1,728
26	7 473	31,37	30,90	34,43	28,72	21,57	4,900	17,32	18,26	13,42	1,960·
27	8,102	34,39	31,37	30,90	34,43	28,72	5,327	17,26	17,32	18,26	2,114
28	9,102	51,50	34,39	31,37	30,90	34,43	6,086	22,98	17,26	17,32	2,302
29	10,249	52,57	51,50	34,39	31,37	30,90	6,691	27,54	22,98	17,26	2,711
30	11,411	53,99	52,57	51,50	34,39	31,37	7,461	24,72	27,54	22,98	3,010
31	12,571	62,83	53,99	52,57	51,50	34,32	8,510	25,10	24,72	27,54	3,094
32	13,823	72,00	62.83	53,99	52,57	51,50	9,763	27,51	25,10	24,72	3,093
33	15,372	72,00	72,00	62,83	53,99	52,57	10,446	41,20	27,51	25,10	3.751
34	16,910	72,00	72,00	72,00	62,83	53,99	11,094	42,06	41,20	27,51	4,431
35	18,333	72,00	72,00	72,00	72,00	62,83	11,694	43,19	42,06	41,20	5,058
36	19,115	72,00	72,00	72,00	72.00	72,00	12,000	50,26	43,19	42,06	5,421
37	19,930	72,00	72,00	72f00	72,00	72,00	12,000	57.60	50,26	43,19	6,042
38	20,687	72,00	72,00	72,00	72,00	72,00	12,000	57,60	57,60	50,26	6,619
39	21,072	72,00	72,00	72,00	72,00	72,00	12,000	57,60	57,60	57,60	6,912

Year	No of Pupils in High Schools (Junior Department) (in thousands)			Total No. of teachers (non-graduate) allotted to High School (in hundreds)	No. of Pupils in High Schools (Senior Department) (in thousand)			Total No. of graduate teachers in High Schools (in hundreds)
	Class VI	Class VII	Class VIII		Class IX	Class X	Class XI	
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
6	...	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...	...
8	30	...	...	15	...	...	...	...
9	30	30	...	30	...	...	...	...
10	30	30	30	45	...	...	...	...
11	30	30	30	45	30	...	...	15
12	1,20	30	30	90	30	30	...	30
13	1,12	1,20	30	131	30	30	30	45
14	1,12	1,12	1,20	172	30	30	30	45
15	1,12	1,12	1,12	168	1,20	30	30	90
16	1,50	1,12	1,12	187	1,12	1,20	30	131
17	1,27	1,50	1,12	194	1,12	1,12	1,20	172
18	1,29	1,27	1,50	203	1,12	1,12	1,12	168
19	1,29	1,29	1,27	192	1,50	1,12	1,12	187
20	2,42	1,29	1,29	250	1,27	1,50	1,12	194
21	2,82	2,42	1,29	326	1,29	1,27	1.50	203
22	2,88	2,82	2,42	406	1,29	1,29	1,27	192
23	2,88	2,88	2,82	429	2,42	1,29	1,29	250
24	3,36	2,88	2,88	456	2,82	2,42	1,29	326
25	4,57	3,36	2,88	540	2,88	2,82	2,42	406
26	4,33	4,57	3,36	613	2,88	2,88	2,82	429
27	4,31	4,33	4,57	661	3,36	2,88	2,88	456
28	5,74	4,31	4,33	720	4,57	3,36	2,88	540
29	6,89	5,74	4,31	847	4,33	4,57	3,36	613
30	6,18	6,89	5,74	940	4,31	4,33	4,57	661
31	6,27	6,18	6,89	967	5,74	4.31	4,33	720
32	6,88	6,27	6,18	967	6,89	5,74	4,31	847
33	10,30	6,88	6,27	1,173	6,18	6,89	5,74	940
34	10,51	10,30	6,88	1,385	6,27	6,18	6,89	967
35	10,80	10,51	10,30	1,581	6,88	6,27	6,18	967
36	12,57	10,80	10,51	1,694	10,30	6,88	6,27	1,173
37	14,40	12,57	10,80	1,888	10,51	10,30	6,88	1,385
38	14,40	14,40	12,57	2,068	10,80	10,51	10,30	1,581
39	14,40	14,40	14,40	2,160	12,57	10,80	10,51	1,694

NOTES

(*a*) This table indicates the plan of expansion *not* taking into account the existing schools and their enrolment.

(*b*) Column no. (2) indicates the total number of non-graduate trained teachers required in Junior Basic (Primary), Senior Basic (Middle) and Junior Departments of High Schools. There are 5,18,018 teachers in the existing schools of which 2,10,496 are untrained (1940-41). It is contemplated that the present number of training institutions can only make up for the wastage of the existing no. of teachers and train the present no. of untrained teachers. Consequently they are excluded from this scheme.

(*c*) Column nos. (8), (12) and (16) indicate the allocation of the non-graduate teachers to the different stages.

(*d*) 4/5 of the leavers of Junior Basic (Primary) Schools are allocated to the Senior Basic (Middle) Schools, and 1/5 of the leavers of Junior Basic (Primary) Schools are allocated to the High Schools.

(*e*) Column no. (20) indicates the number of graduate teachers (trained) required for the High Schools.

(*f*) The ratio of teacher to pupils :—

1 to 30 in Junior Basic (Primary); 1 to 25 in Senior Basic (Middle) and 1 to 20 in the High Schools.

(*g*) Wastage, mortality, failures, etc., are not shown in this table.

(*h*) Attention is drawn to the possibility of completing the scheme of expansion in the 39th year when all the children of the age-group 6—14 will be brought under the compulsory scheme of education.

TABLE G

Estimate of Average Annual Expenditure on Teachers' Training

Type of School for which teachers will be required	No. of teachers required for training	Over 35 years period—Trainee per year	Duration of training	Total No. of places	Cost of training per place Rs.	Total cost per year Rs.
Pre-Primary	33,333	952	2 years	1,904	*450	8,56,800
Junior Basic (Primary)	11.96,200	34,177	2 years	68,354	*450	3,07,59,300
Senior Basic (Middle)	6,25,560	17.873	3 years	53.619	*450	2,41,28,550
Junior Deptts. of High Schools ...	1,81,320	5·181	2 years	10,362	*450	46,62,000
Senior Deptts. of High Schools ...	1,81,320	5,181	1 year	5,181	400	20,72.400
Total ...	22,17,733	63,364	...	1,39.420	...	6,24,79,950

	Rs.
Total gross, cost per year	6,24,79,950
Estimated income from maintenance from half the total no of trainees (excluding Senior Deptts, of High Schools)	1,67,80,000
Total net expenditure per year ...	4,56,99,950

* Rs. 450 *per capital* includes Rs. 200 for tuition and Rs. 250 for maintenance.

Rs. 400 is the cost of tuition *per capital* in the University.

The table does not give details like wastage, etc.

INDEX

N. B.—Numbers refer to pages.

Abbot, Mr. 34, 38, 42.
Activities—Recreative and Social, 81-84.
Administration, 88-92.
Adult Education, 46-55.
„ age range for, 47-48.
„ expenditure on, 52, 110.
Age of entry—to Basic (Primary) Schools, 6-7; 98.
„ Basic (Middle) Schools, 7.
„ High School, 18.
„ Nursery Schools, 14
Attendance Officers, 7

Basic Education 6-13.
„ Committee on 6, 12-13.
„ Estimated cost of 10
„ Primary and middle, 6-13.
„ Stages (Junior and Senior) 3, 7-8, 10,
Braille Code, Uniform 77.
Buildings, See "School Buildings" 6-7.

Compulsory Education age for
„ Areas for 3, 97.
Cost of—Adult Education, 52, 110.
„ Basic Education, 11
„ High School, Education 23, 25.
„ Pre-Primary Education, 16-17.
„ Technical Education 45.
„ University Education 33.
„ Education 94.
Criticisms of the Scheme, 3, 96-103
„ Cost, 2, 97.
Criticisms of the Scheme, Time for completion, 2
Criticisms of the Scheme, Notes by members, 96-103.
Curriculum of Basic Education 7.
„ High School Education, 19.

Education Adult, 46-56.
„ Basic, 6-13.
„ Health, 63-73.
„ High School, 18, 25.
„ Handicapped, 74-80.
„ Physical, 63, 71.
„ Pre-primary 14-17,
„ Religious 4, 101, 103.
Education Technical, Commercial and Art, 34-45.
Education University, 26-33.
„ Women's, 4.
Education Department Central 90.
„ of the Handicapped 74-80.
Education Officers 90.
Employment Bureaux 86-87.
English in Basic Schools, 8.
„ in High Schools, 21.
Examinations, 4.
„ High School, 21.

Expenditure on Education in Great Britain, 1
Expenditure on Education in India, 1.
Expenditure on Education in Intermediate and University Education 31.

Gokhale, Mr. 100.

Haldane, Lord, 29.
Handicapped Education of 74-80.
Health Education 63-73.
High Schools, enrolment, 28.
„ types, 20.
Husain, Khan Bahadur Mian M. Afzal Note by, 96-99.
Hygiene 63, 66, 70.

Illahi Baksh, The Hon'ble Pir—Note by, 100.
Inter-University Board 98, 99, 103.

Khan, The Hon'ble Mr. Tamizuddin, Note by, 99-100.

Lytton Committee 31.

Mackenzie, Sir Clutha 77.
Medical Inspection 63-66.
Medium of Instruction-In High Schools, 21.
Medium of Instruction-In Basic Schools, 8, 11.
Mental Ratio, 75.
Mentally Handicapped institutions for 75.

National Council for Tech. Education 42.
Newman, Sir George, 63, 69.
Notes of dissent, 96-103.
Nursery School, 14-17.

Physical Education, 66, 71.
Physically handicapped pupils 76.
Pre-Primary Education 14-17.

Rahman, The Hon'ble Khan Bahadur Maulvi Sayidur, Note by, 99-100.
Religious education, 4, 101, 103.
Reports Abbot Wood, 11, 16, 34, 45.
„ Joint Committee's 64.
„ Public Health Commissioner's 10,23.
„ Sapru Committee's, 26.
„ Spens, 34.
Reports of the Committees of the Central Advisory Board of Education-Adult Education 53.
„ Basic Education 6, 12.
„ Joint Committee on Medical Inspection of School Children and Teaching of Hygiene in Schools, 63.

Reports of the Committee of the Central Advisory Board of Education—Recruitment of Education Officer, 89, 91.
,, Recruitment, Training and conditions of Service of Teachers, 56.
,, School Buildings, 13, 65.
,, The Second Wardha, 15.
,, Social Service and Public Administration, 84.
,, Technical Education 42.
Ruthnaswamy, M, Note by, 100-101.

Scales of Salaries, for Education Officers, 90.
,, Teachers of High Schools, 22.
,, Teachers of Junior Basic (Primary) Schools, 9.
,, Teachers of Senior Basic (Middle) Schools, 10.
The staff of a Training College, 60. 61.
,, The teachers of Technical subjects, 41, 44.
School Buildings, 1, 3, 65.
,, Medical Service 63.
Selection for High Schools, 19.
,, University education, 30.
Social Service—All-India council for 84.
Statham, Sir Meveral, Note by, 102-103.
Statistics, Cost of Basic Education 10.
,, Enrolment in Universities in India, 109,
,, Estimate of Recurring cost, for High Schools 107.
Statistics, cost for Junior Basic Schools, 104
,, cost for Senior Baise Schools, 106.
,, Progress of Adult Education programme, 110.
,, Recruitment of Teachers 111.
,, Training Institutions 57-58.
Subjects Academic High Schools, 21.
,, Girls' High Schools, 22.
,, Technical High Schools, 21.

Teachers, numbers required for the various types of schools, 59.
,, Training of, 57-62.
Teacher Pupil Ratio, For Junior Basic (Primary) Schools, 9.
,, For Senior Basic (Middle) Schools, 9.
Technical, Commercial and Art Education 34-45.
,, Commercial and Art Institutions, the teacher in, 41.
,, Education function of 35.
Technical Education National Council for 42.

University Education 26-33.
,, Education Royal Commission on, 29.
,, Education Sadler Commission 29
,, Grants Committee 32, 99.

Women's Education 3.
Wood, Abbot Report 11.

Youth Movement 83-84

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LIST OF PUBLICATIONS OF THE BUREAU OF EDUCATION, INDIA

Serial No.	Names of Publications	Year of Publication
1.	Report on Vocational Education in India (Delhi, the Punjab and the United Provinces) (E. H. L. 34)	1937
*2.	Report of the Women's Education Committee on primary education of girls in India 1936	1937
*3.	Report of the Women's Education Committee of Central Advisory Board of Education to consider curriculum of Girls' Primary Schools in India	1937
*4.	Report of the Vernacular Education Committee of the Central Advisory Board of Education appointed to consider certain questions connected with the administration and control of Primary Education	1937
5.	Report of the First Committee of Central Advisory Board of Education appointed to consider the Wardha Education Scheme (E.H.L. 40)	1938
6.	Report of the 2nd Wardha Education Committee of the Central Advisory Board of Education (App. IV to 5th meeting proceedings)	1940
7.	Report of the Adult Education Committee of the Central Advisory Board of Education, 1939 (E.H.L. 46) (App. III to 5th meeting proceedings)	1940
†8.	Report of the Social Service and Public Administration Committee of the Central Advisory Board of Education in India, 1940, together with the decisions of the Board thereon (E.C. 6)	1941
9.	Report of the Joint Committee appointed by the Central Advisory Board of Health and Central Advisory Board of Education on the Medical Inspection of School Children	1941
10.	Report of the Scientific Terminology Committee of the Central Advisory Board of Education in India, 1940, together with the decisions of the Board thereon (E.C. 5)	1941
11.	Proceedings of the 6th Meeting of the Central Advisory Board of Education held at Madras on 11th and 12th January 1941 (E.C. 4 VI)	1941
12.	Proceedings of the 7th Meeting of the Central Advisory Board of Education in India held at Hyderabad, Deccan, on 14th and 15th January 1942 (E.C. 4 V II)	1942
13.	Report of the School Building Committee (E.C. 8)	1942
14.	Report of the Uniform Braille Code Committee (E.C. 7)	1942
15.	Report of the Examination Committee. 1942 (E.C. 12)	1942
16.	Report of the Expert Committee on a Uniform Braille Code for India with the Braille charts printed in India Alphabets, 1942, as subsequently modified	1942
17.	Proceedings of the 8th Meeting of the Central Advisory Board of Education held at Lucknow (E.C. 4 VIII)	1943
18.	Report of the Joint Committee of the Central Advisory Board of Education and the Inter-University Board appointed to investigate the question of the relation of the School Leaving Certificate Examination to the Matriculation Examination 1942 (E.C. 9)	1943
19.	Report of the Committee of the Central Advisory Board of Education on the training, recruitment and conditions of service of teachers (E.C. 10)	1943
20.	Report of the Committee of the Central Advisory Board of Education appointed to consider the question of the recruitment of the Education Officer, 1942, together with the decisions of the Board thereon (E.C. 11)	1943
21.	Report of the Examination Committee	1943
22.	Proceedings of the 9th and 10th Meetings of the Central Advisory Board of Education in India held in October 1943 and January 1944 respectively (E.C. 4 IX & X)	1944
23.	Report of the Technical Education Committee, 1943 (E.C. 16)	...
24.	Report of the Test Book Committee, 1943 (E.C. 15)	1944
25.	Report of the Examination Committee (Technique of Examinations), 1943 (E.C. 17)	1944

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* Not published previously, but proposed to be included in future reprints.

† Published by the Central Advisory Board of Health.

Serial No.	Names of Publications	Year of Publication
26.	Report of the Committee of Central Advisory Board of Education appointed to consider the question of training, recruitment and condition of service in universities, etc. together with the decisions of the Board thereon (E.C. 22)	1945
27.	Report of the Central Advisory Board of Education on Post-War Educational Development in India, 1944 (E.C. 13)	1945
28.	Volume containing reports of the Committees of the Central Advisory Board of Education (E.C. 14)	1945
29.	Report of the Administration Committee of the Central Advisory Board of Education	1945
30.	Proceedings of the 11th Meeting of the Central Advisory Board of (E.C. 4. XI)	1945
31.	Report of the Agricultural Education Committee of the Central Advisory Board of Education, 1944 (E.C. 20)	1945
32.	Proceedings of the 12th Meeting of the Central Advisory Board of Education held at Mysore in January 1946	1946
33.	Report of the Religious Education Committee of the Central Advisory Board of Education	1946
34.	Development of Higher Technical Institutions in India (Interim Report of Sarkar's Committee)	1946
35.	Report of the Committee of the Central Advisory Board of Education on selection of pupils for Higher Education	1946
36.	Report of the Committee of Central Advisory Board of Education on conditions of service of teachers	1946